COMING FEATURES

(dates are tentative)

GENERAL

Microscopic Fiber Study.....May 7
Cellulose Acetate for Insulation .....May 14
Designing Narrow Fabrics..May 14

COTTON

Higher Speeds and Fewer Processes .....April 30
Dress Fabrics .....May 7
Marquisette Weaves.....May 21

WOOL

Destroying Anthrax.....April 30
Backed, Double, and Treble Cloths .....May 14
New Fabrics .....May 21

SILK

Loom Shipping and Driving.May 14
Modern Soaking .....May 21
Raw Silk Classification.....May 28

RAYON

Weaving on Cotton Looms...May 7
Adjusting Loom Lay.....May 21
Testing Delustered Acetate..May 21

KNITTING

Obsolescence in Outerwear Equipment .....April 30
Hosiery Testing .....May 7
Styling Half Hose.....May 14

PROCESSING

Preventing Shrinkage of Wool Knit Goods.....May 7
Degumming Silk-Wool Mixtures .....May 21
Bleaching Cotton-Rayon Hosiery .....May 28

ENGINEERING

Arc Welding .....May 7
Self-Cleaning Motors.....May 7
Waste Heat in Water.....May 21

Textile World

(*Formerly Textile World Journal*) with which are combined *Textiles, Posselt's Textile Journal* and *Textile Advance News.* Published Weekly, United States and possessions, $4 per year; Canada (including Canadian duty), $6.50; Mexico, $4; Central and South America and Pan-American Union, $6; other foreign countries, $8 U. S. currency, or 40 shillings. Single copy, 20 cents, excepting special issues.

Member A.B.P. *Member A.B.C.*

Textile World

ESTABLISHED 1868

DOUGLAS G. WOOLF, *Editor*

William B. Dall.....*Managing Editor*
Edwin D. Fowle.....*Associate Editor*
Winn W. Chase.....*Assistant Editor*
John Black.....*Assistant Editor*
E. S. Loemker.....*Art Director*
James A. Austin....*New England Editor*
Ralph C. Maultsby.....*Southern Editor*
Charles W. Fisher....*Philadelphia Editor*
Paul Wooton..*Washington Correspondent*
G. E. Conkling.....*Publishing Director*

Contents—April 23, 1932

Editorial: "Making Port in the Storm"..... 11
The Week in Textiles as Reflected in This Issue..... 12
Silk "Two-Tone" Effect Preventable in Primary Markets. 14
A Merchandising Opportunity for Wool Goods..... 17
Systematic Maintenance Saves Money, Improves Quality. 18
Exhibit at N. C. State Features Original Fabric Designs. 19
"Typp"—a Basis for Numbering All Yarns..... 20
Mixes, Pickers, Card Clothing, etc., Discussed at Raleigh. 24
Silk Hosiery Loses, Rayon Gains, Report Shows..... 26
Vat-Color Dyeing in Pressure Machines..... 27
Plans for Textiles at Chicago World's Fair..... 38
Mr. Debry's Talk Spurs Rayon-Silk Controversy..... 38

Overseers' Round Table.. 28
News About Men..... 30
Textile Calendar..... 30
Obituary 31
News About Mills..... 32
Machinery and Processes. 34
Questions and Answers... 36
TEXTILE WORLD Analyst. 41
Cotton and Cotton Yarns. 42
Wool and Worsted Yarns. 42
Silk, Silk Yarns, Rayon.. 43
Fabric Markets..... 44
Knit Goods Markets.... 45
Financial Reports..... 46
Business News..... 47
Quotations 48

Copyright, 1932, by Bragdon, Lord & Nagle Co., Inc.

Semi-annual Index is sent to subscribers on request. TEXTILE WORLD is also indexed in the Industrial Arts Index to be found in public libraries.

BRAGDON, LORD & NAGLE CO., INC.

Division of McGraw-Hill Publishing Co., Inc., 330 West 42d St., New York

Copyright, 1932, by Bragdon, Lord & Nagle Co., Inc.

Bragdon, Lord & Nagle Co. Division

H. G. Lord.....*President*
Frank L. Nagle.....*Chairman*
James H. McGraw, Jr.....*Treasurer*
Herbert O. Barnes.....*Secretary*

McGraw-Hill Publishing Co., Inc.

James H. McGraw .....*Chairman of Board*
Malcolm Muir .....*President*
James H. McGraw, Jr.....*Vice-Pres., Treas.*
H. C. Parmelee..*Vice-Pres., Editorial Director*
C. H. Thompson .....*Secretary*

Branch Offices:

Washington .....*National Press Building*
Chicago .....*520 N. Michigan Ave.*
Philadelphia .....*1600 Arch St.*
Cleveland .....*501 Guardian Bldg.*
St. Louis .....*1556 Bell Telephone Bldg.*
San Francisco .....*883 Mission St.*
Boston .....*1427 Statler Bldg.*
Greenville, S. C.....*1303 Woodside Bldg.*
Detroit .....*2-257 General Motors Bldg.*
Los Angeles ....*339 Chamber of Com. Bldg.*
London, England.....*Aldwych House, W.C.2*

ATALANTA FAILED TO CONCENTRATE

The crafty Hippomenes, knowing that Atalanta put to death all who could not outrun her, threw three golden apples in her path during the race. As she paused to snatch up each one, he outdistanced her and saved his life.

Concentrated Effort Wins

The path of the mill executive, today, is beset with far more distracting problems than a few golden apples.

Unexpected credit losses—annoying collections, and lack of working capital make impossible the concentrated effort which present-day conditions demand.

An arrangement with Commercial Factors Corporation eliminates these problems and permits the manufacturer to devote *all* his time to the more profitable and productive phases of the business.

Details will be forwarded upon receipt of your inquiry.

COMMERCIAL FACTORS CORPORATION

Fred'k Vietor & Achelis, Inc. Established 1828 | Schefer, Schramm & Vogel Established 1838 | Peierls, Buhler & Co., Inc. Established 1893

TWO PARK AVENUE - - - NEW YORK

April 23, 1932

Textile World

Vol. LXXXI, No. 17

Published every Saturday by Bragdon, Lord & Nagle Company
Division of McGraw-Hill Publishing Company, Inc., New York

Editor: Douglas G. Woolf

"Making Port in the Storm"

THE apprehension which members of the National Association of Hosiery and Underwear Manufacturers felt, most justifiably, a year ago when it became known that the organization was to lose the services of John Nash McCullaugh, managing director, was completely allayed at the annual meeting last week. The forceful statement presented by Earl Constantine, the new director, and the constructive program outlined by him, demonstrated that the many months which had elapsed before Mr. McCullaugh's successor was appointed had been time well spent.

▼

Admitting frankly his lack of knowledge of the hosiery and underwear industries specifically, Mr. Constantine displayed a thorough knowledge of the fundamentals on which all industries must build if they are to progress.

The title of his address, "Making Port in the Storm," was a happy choice. As he pointed out, industry today may be likened to a ship in distress; to enable it to "make port," there must be actual facts by which the course may be steered, and complete confidence in master and crew.

It is proposed to develop those facts—thus carrying out the thought emphasized by John W. Mettler, when he retired as president a year ago, and again by President William Meyer last week. Although details of the method by which the industry will know its production-and-demand status have not been completed, it is known that careful thought is being given to the development of timely and accurate statistics. Upon the extent to which individual cooperation is forthcoming depends the extent to which the data will be of value.

Mr. Constantine's suggestion of a simplification of the association's three cost manuals, in order that the industry may be educated in the simplest possible terms on the fundamentals of sound cost determination, was an equally vital contribution.

Finally, the plan for a fall conference of principal executives of member mills, which may become a semi-annual event, offers a medium for exchange of information and thoughts. Stripped of ballyhoo, and devoid of side attractions, such a working conference fills a need which the annual affair at Philadelphia cannot meet.

▼

Thus, plans are under way to provide the first essential if the ship is to make port: facts.

The other requirement, confidence in master and crew, was assured by Mr. Constantine's brilliant statement of policy last week.

The Week in Textiles

as Reflected in This Issue

General

Systematic Maintenance
Some of the advantages to be gained by a systematic maintenance program are improvement in quality, saving of money, and the securing of useful data in regard to the condition of the equipment. *(page 19)*

Universal Yarn Numbers
Publication of the world's most complete yarn-number conversion table in this issue leads one of our editors to inquire again why one numbering system cannot be used for all yarns and to propose a universal system which seems practical. *(page 20)*

Cable Cord, Seine Twine, Trot Line
Technical phases of the manufacture and numbering systems of these cords are considered. The number of a cable cord indicates the number of strands of single 9s of which it consists. *(page 36)*

Buying Belting
Buying belting on the basis of thickness or weight is declared to be unsatisfactory. A method based upon power per dollar is suggested. *(page 37)*

Textiles at World's Fair
Plans for handling the textile exhibition at the Chicago World's Fair in 1933 are crystallizing. *(page 38)*

New Fabric Effect
A new fabric, Doe-Tex, has been launched by Du Pont. *(page 39)*

Large Orders "At a Price"
Should mills cut price for a big order? Sometimes this time-honored policy is uneconomic, and such orders really call for a higher price as pointed out in TEXTILE WORLD Analyst. *(page 41)*

Cotton

N. C. State's Exposition
The annual exposition of the textile school of N. C. State College displays the effective fabric designing done by the students. *(page 19)*

Carding and Spinning Discussed
The Eastern Carolinas Division of S.T.A. held informative discussion on cotton mixes, card clothing, roller covering and related matters at recent meeting at Raleigh, N. C. *(page 24)*

Cotton Without Trend
Cotton failed to get anywhere this week as half-hearted rallies were followed by recessions and no real trend seemed evident. *(page 42)*

Yarns Are Nominal
Cotton yarns remained dull and prices were nominal. Figures at which small sales were made seemed based on cotton at 5c. or lower and must mean a loss to spinners. *(page 42)*

Cottons Resist Down Trend
Cotton goods are still resisting the downward price pressure courageously. Second hands are underselling mills on print cloths. *(page 44)*

Wool

Cooperative Boost Suggested
A cooperative national advertising campaign is suggested as one definite way to improve the wool goods situation. The author, who has had broad experience in the field, points out how individual mills might capitalize the cooperative effort. *(page 17)*

Wool Nominal
Wool is called weaker by some and by others firmer. Fact is insufficient business has come to hand to try out market and prices are nominal. *(page 43)*

Await Revival
Worsted yarns await revival of demand which it is hoped more vigorous spring retail sales will bring. *(page 42)*

Fabric Prices Clearer
Most wool goods mills have formally announced their fall fabric prices and market hopes for at least a temporary stability. *(page 44)*

Knitting

1930-1931 Hosiery Survey
Quality merchandise has suffered, and rayons have gained, according to Fed-

The Textile Outlook

IT SEEMS to be a matter of doubt in the market whether much lower prices than those now quoted on most textiles would appreciably broaden current demand. From the retail field comes word that some stores find that bed sheets sell better just above a dollar than they do below. This may be an isolated case but it suggests a likely psychological turn which may have a stabilizing effect upon the primary markets. Excessive price cutting may repel buying or turn the consumer to the next higher price range. Price has been too much stressed during recent lean years so that it becomes a prime consideration to the detriment of quality and styling. Already there are movements under way to stress the inherent values in goods. Cotton goods and wool goods "Weeks" bring out the suitability of these fibers for various purposes and advertising campaigns which have been successful stress utility and style and let price take care of itself. Cottons at present are still waging war against downward price pressure. Wool goods at 10% under last season are finding progress for fall slow. Silks at uncertain prices get scattered support for summer wear. Knit goods are generally firm and in fair call.

eral report on 1930-1931 hosiery study. *(page 26)*

New Full-Fashioned Machines
Advantages and technical features of three new full-fashioned hosiery machines, two of which are suitable for single-unit work, are described. *(page 34)*

80-Wrap Hosiery Machine
Announcement is made of a new circular hosiery machine of the individual-needle-wrap type by means of which it is possible to make use of eighty different colors. *(page 35)*

Rayon on 45-Gauge Machines
The preliminary preparations of a full-fashioned machine for knitting rayon hose are outlined. *(page 36)*

Mesh Half-Hose? Maybe!
Half-hose manufacturers doubt the prospects for mesh for men, despite reports of good sales, and line is limited to a few mills. *(page 45)*

Swimsuits Still Backward
With summer a brief eight weeks off, numerous distributors have not placed initial swimsuit orders yet, and knitters regard last minute congestion as inevitable. *(page 45)*

Underwear Hits Credit Snag
Refusal of underwear mills to ship duplicate orders until first orders are paid, is resulting in considerable lost business. *(page 45)*

Silk

"Two-Tone" Silk Problem
An analysis by D. E. Douty, of the "two-tone" silk problem, inspired a Philadelphia conference of hosiery manufacturers to recommend action on this problem by the National Association of Hosiery and Underwear Manufacturers. Assembling of small lots for large-unit shipments appears to be the chief source of trouble. *(page 14)*

Rust Spots in Crepe
Oxidation of metallic particles worn from bearings and deposited on the goods by oil splashing is determined as the cause of the development of rust spots on silk crepe. *(page 36)*

Silk Prices Decline
Primary market levels lowered again this week, but stronger Japanese cables Tuesday brought a firmer tone. *(page 43)*

Spun Silk Call Improves
Underwear knitters and broadsilk weavers both increased their orders for spun silk this week. Thrown silk is quiet. *(page 43)*

Printed Broadsilks Active
Printed chiffons and georgettes move actively at firm prices; flat crepes cleared at sacrifice. *(page 44)*

Rayon

Silk vs. Rayon
Comment by Paul C. Debry of Duplan Silk Co. on the primary place in luxury fabrics which is being taken by rayon at a recent style luncheon, drew much discussion in the silk trade. *(page 38)*

Steady Yarn Turnover
Producers expect April yarn sales to come close to March, and consider situation very satisfactory. *(page 43)*

Bachrach-International

Mrs. Herbert Hoover in the first cotton gown seen at a State reception since the Civil War. The dress is of dimity decorated with blue spring flowers and trimmed with ruffles of the same material. George A. Sloan, president of Cotton-Textile Institute was a guest at the reception where it was first worn

Processing

Vat Dyes in Pressure Machines
Condition of the package is an important factor in governing the success of vat-color dyeing in pressure machines. *(page 27)*

New Package-Dyeing Machine
Description is offered of a new machine for the dyeing of tops, yarn packages, beams, raw stock, and card slivers. Advantages of the new unit are outlined. *(page 34)*

Individual Extractors
Development of a new machine consisting of a battery of small individual yarn-package extractors for removing excess moisture from the packages after dyeing is announced. *(page 35)*

Bleaching in Chain Form
When it is necessary to bleach before weaving, the chain-link method is often found to be very economical. *(page 36)*

The Business Outlook

THERE is a slight, belated touch of spring in some of the recent business statistics, despite the solid frost of fear and defeatism in the financial atmosphere. In most of the important indicators, allowing for the usual seasonal factors, the discouraging decline of recent months seems to have stopped, and in some a slight improvement has appeared. Steel activity, especially in the independent concerns, is being sustained by a slowly rising stream of automotive orders. Electric power production appears to be straightening out to a stabilization level, and building contracts likewise are supported by some improvement in public construction work as the season opens. Merchandise freight movement and check payments have picked up a bit, possibly reflecting some spring stimulus in retail trade. Federal Reserve efforts to force credit expansion and checkmate danger of other direct inflationary devices continue encouragingly aggressive, but member bank response is still slow. Reserves and deposits are piling up in the leading centers under the influence of large-scale open-market operations, but the member banks still seem reluctant to give steady and decisive support to security markets.—*The Business Week*.

Silk "Two-Tone Effect"

Menace to Knit Goods Trade

Preventable in Primary Markets

PLANS for a broad study of the "two-tone" raw silk problem were being formed this week by the National Association of Hosiery and Underwear Manufacturers, following an analysis of the situation given by D. E. Douty, general manager, U. S. Testing Co., at a conference in the Commercial Museum, Philadelphia, during the Knitting Arts Exhibition, last week. Discussion at the conference, stimulated by Mr. Douty's address, disclosed that the de-grading of raw silk imported from Japan, has reached such proportions as to constitute a problem of immediate significance to the hosiery industry.

Matter in Committee Hands

The outcome of the conference was the adoption of a motion instructing the National Association of Hosiery and Underwear Manufacturers to appoint a committee to review the matter and outline plans looking to a solution of the problem. The gist of the issue, as disclosed by speakers at the conference, is that raw silk imported from Japan during recent months has been of uneven standard, stocks frequently containing mixtures of different crops, which resulted in the production of inferior hosiery.

Earl Constantine, managing director of the hosiery association, suggested the appointing of the committee. He pointed out that the industry must insist upon standard silk and expressed confidence that the Silk Association of America would be glad to cooperate with the hosiery association's committee in the steps necessary to solve the problem.

Analysis by D. E. Douty

An abstract of Mr. Douty's speech follows:

"From the silk cocoon filaments, which begin with a small diameter, increase quite rapidly to a maximum, run uniformly for a while, and then slowly taper off, the Japanese raw-silk reeling girl is expected to reel an even raw-silk thread. A 13/15-denier raw silk should theoretically average 14 denier; and, by the Raw Silk Rules of the Silk Association of America, should show by actual test an average between 13.5 denier and 14.5 denier. It requires from four to six cocoon filaments, depending upon the state of the cocoons, to produce a 13/15-denier thread; and the reeling girl must keep them adjusted in proper proportion of fresh cocoons, partially exhausted, and nearly exhausted cocoons. There is therefore an unavoidable change in the raw-silk thread, with addition of fresh cocoons, of about 1½ to 2 deniers in the normal process of reeling.

"With this in mind, the Raw Silk Classification Committee of the Silk Association of America has taken the position that a raw silk thread which is within two deniers of the average size is *normal*. It also happens that in viewing raw silk panels on the seriplane boards a sudden change of two deniers is just about noticeable as a very faint stripe. Therefore, if the reeling girl is able to change the cocoons regularly, if no cocoon filament break before near-exhaustion, and if reeling speed is not too great, she can make the ideal thread which is rated on the seriplane panel as 100%. It is, of course, not possible to maintain this ideal condition continuously.

The Filature Industry

"Years ago when the American silk industry was small and the manufacturing units were small, the Japanese began to replace the hand reeling of the farmers' families by the power driven, or so-called steam filature.

"As the American manufacturing units increased and the volume of its specific numbers of construction requiring uniformity in raw material expanded, the manufacturer began to demand his raw silk in larger units or runs. From five-bale lots it increased to 10, 20, 30, 50, 100, etc., until at present it is not uncommon for some knit-goods organizations to purchase 200 and 300 bales at one time and of one quality. Three hundred bales, however, would exceed the entire year's production of many filatures. It, therefore, becomes necessary to ship small lots at frequent intervals.

"In Yokohama these lots were formerly carefully inspected, sorted, graded, and assembled into marketable 10-bale runs. The exporters maintained large inspection laboratories with skilled inspectors who knew the filature, the types of cocoons which it purchased, and its general reputation for workmanship. In addition, the inspectors made a careful visual inspection for uniformity of color, manner of packing and other characteristics which influence quality. This visual inspection was followed by sizing, winding and other tests to determine quality. In this way the grade of the small lot was established, and it was assembled with other small lots into runs under a single chop to supply the demands of the American consumer for 20, 40, 60 or 100 bales of the same grade and chop.

"A big filature of 1,000 basins will produce approximately 1,500 bales in ten months of operation, or an average of 150 bales per month.

"Do you think it would be good business for its manager or his Yokohama or Kobe broker to hold back his product until a 100- or 200-bale order could be filled at one shipment? It is to his interest, and his operating capital—especially in recent years—would compel

him, to keep a constant flow of his product to the primary market. His 104-bale lots must be combined with 10-bale lots from other large filatures determined by inspection to be of approximately the same grade, in order to fill orders of American customers for 50-, 100-, and 200-bale lots.

"The exporter in Japan and the importer in America assumed the responsibility for this assembly, and in accordance with the demands of the American consumer, stood responsible for its grading of the delivery.

"I emphasize the fact that this assembling of bales and lots had its origin in an American demand because I feel that any criticism which may follow of the results of the system should not reflect alone upon the firms in Japan who responded to the demand.

Mixed Origin of Cocoons

"As the industry expanded, the system of assembling bales and lots naturally opened the door to irregular lots and unsatisfactory practices. When the filatures began transporting cocoons from one district to another, the inspector no longer could be assured of their origin, and the names of districts upon chop tickets became meaningless.

"Stripes have become the dominant grading defects in silk hosiery. They have two general causes, (a) either a marked change in size of the tram or (b) difference in the dye absorptive capacity of the raw-silk filament.

"There seems to be a general impression that two-tone effect is of recent origin and that it is rapidly increasing. It may be increasing; but it has probably existed for a number of years, although more recently it is recognized as differences in shade instead of differences in size. When the hosiery industry was using 5, 6, 8 threads, etc., and on up, the variations were not very noticeable. They generally "evened-up"; but if they did not, the buying public were not so critical.

Silk inspection table

"As our tram decreased to 5-thread, 4-thread, 3-thread —and we now strive for 5-thread, 4-thread, 3-thread ing test no longer reflects the evenness of raw silk as it works out in manufacture. The sizings are reduced to 225 meters, then to 112½ meters, and now some technicians are advocating 9-meter tests to determine the short, fine, and coarse ends. The seriplane was developed and is now in use to estimate the unevenness within the length of a sizing skein.

"We formerly drew ten skeins to represent the bale and sampled two bales to represent a 5-bale lot. The official sample today consists of 40 skeins drawn at random, four from each bale of a 10-bale lot; and the next report of the Raw Silk Classification Committee of the Silk Association will probably recommend 50 skeins from 10 bales, five skeins from each bale.

"In the Japanese filatures every skein can be inspected. In Yokohama and Kobe every book can be inspected; but in America our inspection and our testing must, by the very nature of the market conditions, depend upon a representative sample of reasonable size. Therefore, the fundamental assumption of our entire system is; sufficient uniformity within the market unit of the merchandise, so that a representative sample can be drawn and a safe judgment formed from the inspection and test results upon this sample.

10-Bale Lots Lack Uniformity

"I regret to state that in recent years there have been an increasing number of indications that 10-bale lots of raw silk are arriving in this market so lacking in uniformity of color, nature, size, evenness and other quality characteristics as to make it impossible to take the official sample drawn at random from each bale of a lot, inspect it, and test and obtain results which may be depended upon to represent the lot. The criteria of dependability are of two kinds: (a) The laboratory's indicator of reliability is the accuracy with which the lot can be re-sampled and re-tested and obtain duplicate results with a reasonable limit of tolerance. (b) The mill's indicator of reliability is the extent to which the quality of the finished product and the cost of the manufacturers operations confirm the results of the inspection and test. If the lot is not uniform, the laboratory results upon the sample may or may not reflect the lack of uniformity. If the sample, upon which we may depend, does indicate lack of uniformity, damage is prevented; but if it does not, the mill results usually come too late to be of value in preventing damage.

"In so far as you base your judgment of raw silk, which you prepare to use in your mill upon a sample which is less in quantity or distribution than the 40-skein standard sample, drawn at random from each and every bale, you increase the hazard of depending upon a non-representative sample. One book to represent a 10-bale lot, ten skeins drawn from two bales of a five- or ten-bale lot illustrates sampling which is too limited in distribution and number to give a representative sample of any except a very uniform 10-bale lot of raw silk.

"Now this may appear to you to be a gloomy picture. You may justly ask what you can do to insure the quality of the raw silk which you purchase and to protect you from the loss that comes from the larger proportion of seconds and thirds in your product.

"The first and most important thing to do is to take steps to impress upon the primary market that a bale or group of bales constituting a lot shall be uniform in nature, color, type, district, and season of cocoons, size, etc., even if it is necessary to group bales in less than ten-bale lots.

"The new conditions which are introduced in the Yokohama and Kobe markets, Jan. 6, 1932, are both favorable and unfavorable to securing desirable results. Since that date all raw silk intended for export must be bought and sold on the certificate of grade issued by either the Yokohama or Kobe Imperial Conditioning House and the certification of grade by either is final. No silk is allowed to be shipped unless it has been

inspected, tested, certificated, and sealed by the Testing House; and it must leave the port with the seal unbroken.

"Formerly the export companies maintained large, well-equipped inspection departments, responsible for the proper grading and packing of the cargo. They had a chance to examine every book and even skeins if it seemed necessary and to assemble the books into export bales. Since Jan. 6, I understand, they do not have that privilege, but must content themselves with the 50-skein sample which is furnished them by the testing house. They are complaining bitterly of this curtailment in their opportunity to inspect and grade material for which they must be responsible to their customers in the secondary markets like New York. If, therefore, this curtailment of the exporters opportunity to inspect is continued, there is no use urging upon him the necessity of uniformity within the lot. To this extent the condition is unfavorable. On the other hand inspection, testing and grading is now centralized in the Yokohama and Kobe Imperial Conditioning Houses, operated directly under control of a Minister in the Japanese Cabinet and with all of the regulatory control of the Japanese Government.

"If the conditions, which are causing trouble in the knitter's raw-silk supply can be remedied, either in the production, merchandising, or packing of the raw silk in Japan, the Imperial Government certainly has the power and facilities to correct them.

Collective Action Urged

"Through your association you have a powerful means for collective and co-operative uniform action. The Silk Association of America has already, through the initiative of its Knit Goods Group in cooperation with the Broad-Silk Division and Raw-Silk Division sent to Viscount Makino, president of the Central Raw Silk Association of Japan, a memorandum upon the two-tone effect. If your association will join with the Silk Association of America in a further and more complete memorandum to the Central Raw Silk Association of Japan urging that the Yokohama and Kobe Conditioning Houses extend their inspection so as to absolutely guarantee the uniformity of each bale or group of bales treated in the export as a single lot, I believe you will get thorough and effective action. With the quality control of the merchandise, which they buy in Japan and sell in New York, taken out of their hands, I am inclined to think that the importers in New York would welcome the assistance of your association in bringing about an arrangement in Japan which will protect them in their relations and transactions with your members. Their present condition is difficult and I am inclined to think will become more difficult as time goes on and the new arrangement develops along lines which now appear probable.

"The assembly of bales and lots and their preparation for export previously rested almost entirely with the limited number of export firms, with their well-equipped inspection departments in Yokohama and Kobe. It is almost dangerous to predict, but I venture to guess, that this function will gradually shift to the larger filature organizations in the country. Already an increasing number of export bales are being packed in the country, shipped to Yokohama and Kobe in heavy canvas bags, submitted for grading, and delivered to the exporter, sealed ready for shipment.

"The small filatures are always pressed for funds, for cocoons, for facilities, and for merchandising their product. They may continue to function through Yokohama and Kobe brokers, but the temptation to send their product to the re-reeling department of the neighboring large filatures and to merge their interests with the large filature to meet the difficulties of the new export regulations seems like a very logical development. There seems to be suggestive evidence already that some of the large filature organizations have themselves become raw-silk merchants and export agencies.

"It is therefore incumbent upon the association to make a thorough study of the conditions of your raw-silk supply, to become accurately informed upon its ramifications, and to take an active part in cooperation with the Silk Association of America and in every way to safeguard your supply and to facilitate your raw silk transactions."

Discussion of Douty's Paper

The presentation of Mr. Douty's address stimulated a general discussion from which the following comments are abstracted:

He urged increased vigilance in examining the raw silk when it goes to the mill; some of the mixed silk complained of, he said, is caused by accident, some by carelessness, and some is deliberate.

"If you base selection of your raw silk on a sample smaller than standard sample size," said Mr. Douty, "you increase the danger of getting a poor or uneven grade. The samples for testing should be taken from all parts of the stock; it is not sufficient to take it from the top or bottom or both."

He emphasized the importance of detecting the uneven quality of silk before putting it into the soaking tub, as claims cannot be made afterward, and said it would be advisable for hosiery mills to hire experts in case they do not have such already, to inspect the silk closely on delivery to mills.

"Generally speaking," he added, "the Japanese are doing everything possible, considering the cost question, to give you the silk you want. Of course, they have to economize just as we have to these days.

"The specification methods of the hosiery mills in buying silk do not appear to be satisfactory. If you ask for 85%, that is too low for hosiery. You can get two 85% silks which are quite different, although they average the same percentage. Some are mixed with 100s, 80s, 75s and average 85%, while other lots go down to 55% and yet average the same.

"One solution would be to use the complete specification of the Silk Association which specifies Grade A A as best for hosiery; when you buy by exact specification that way, any failure to come up to that specification can bring official adjustment, and you have basis of claim. Just now you use the designation of 85% too loosely."

To ascertain properly the quality of silk shipments, he said, it is necessary to trace lots back to Yokohama and Kobe conditioning houses and to get full data from each as to where the cocoons are grown; every reeler should state on shipment where cocoons come from, he said.

A Merchandising Opportunity *for Wool Goods*

By Walter Brown

◆ *The author, who here suggests a vigorous merchandising campaign as a means for bringing return of profit-making to the wool goods industry, does not talk from any abstract viewpoint. He has the practical background of many years' service as advertising and sales-promotion manager of Cleveland Worsted Mills Co., and is the author of a monograph "The Clothing of the People."*

IF PERCHANCE any wool goods mill publishes a balance sheet showing a profit (and a few do), it is front-page news and trade gossip for several weeks. How to rehabilitate the wool piece goods industry and make profit the rule rather than the exception, is the problem that is now receiving close attention. Up to the present, all the constructive work accomplished, is in the production end of the business.

If all reports are true, mills have cleaned house thoroughly, and are in a position to produce better fabrics on a substantially lower cost basis than ever before. If they had put as much effort and thought into merchandising as they have in production, perhaps the industry would be in a more favorable position.

Here are a few thoughts, which if put into action and adhered to, might be of great help to every piece-goods mill in the country:

1. Increase the sales force, open up sales offices in strategic centers, and contact the trade oftener. Sales expansion is needed now more than ever. Retrenchment of sales organization at this period is dangerous.
2. Don't show all your samples at the opening of the season. Keep up interest in your product by bringing out many new fabrics and styles between seasons.
3. Create better styles. This can be done successfully, only through the medium of an highly specialized style research bureau. Most styling is done on a "hunch" basis. Make fewer styles, but make them more worth while.
4. Instruct the sales force to talk more about fashion and style, and think less about your competitor's price. The customer will bore you with price talk, but he'll buy the style that's right.
5. Publicize the industry. Without doubt, this is the most important factor to concentrate on, and should be the foundation of any merchandising policy that the mills undertake.

Suspicion of each other's motives must be subordinated to the bigger task that lies ahead. National advertising on a cooperative plan, is the first step necessary in order that the public shall become more familiar with the products of American cloth manufacturers. Invite every cloth maufacturer to participate in this constructive undertaking, and, to cover expenses, assess each member a certain sum based on the number of looms in his plant. Keep up this nation-wide advertising for at least one year. Make it an educational campaign, a campaign devised to make it a comparatively easy matter for any individual company to follow on with its own advertising, under its own power, and to capitalize on the publicity and interest that the national advertising has created.

Numerous mill men will ask "what does the average man care about who makes the cloth that goes into his suit?" Very little, perhaps, until some enterprising advertiser comes along and changes his mode of thinking. Men paid scant attention to the lining in their suits, until advertising pages educated them to the fact that certain makes of linings are better than others. John Public is interested, because the advertisers have made him "lining conscious." Also the retail salesman is given another talking point which helps to consummate the sale.

Seldom does the retailer know the name of the manufacturer that makes the fabrics in the clothes he stocks, and of course the consumer knows less. Usually the only information available for the consumer is, that the cloth is "all wool" and wears well. That's all the information he can get, because in all probability that's all the salesman knows. But don't blame the salesman. The clothing manufacturer knows, but does not pass it on.

Clothes are the most important and necessary adornments that men have to worry about, and yet, here is practically a virgin field for the enterprising cloth manufacturers who will make their name and product a power in thousands of up-to-date clothing establishments.

How would the consumer know he's getting cloth made by any certain manufacturer? He'll ask to see the label that's sewed in the coat. Will the clothing manufacturers object to sewing in the label? At first, yes. However, the national cooperated advertising campaign, and the campaign undertaken individually by enterprising mills will have placed a fund of useful information in the hands of the public for guiding the consumer to ask for specific fabrics and to look for the mill's identification.

Obviously, when the public is educated to ask for a certain make of fabric, clothing manufacturers would not be so shortsighted that they would refuse to sew in the manuacturer's label, especially when demand for specific fabrics would become greater and more insistent.

Few products have so many features of universal interest as the fabric field offers, and manufacturers could present an absorbing story of their products. The industry is not overproduced; rather, it is undersold. People must wear clothes. They are an absolute necessity. Literally, there are several million men in need of clothes at this moment; many of them *can* afford to buy, but instead they are spending 35c. at the cleaners, instead of $35 at a clothing store. This can't last long. The break must come soon, and when it does, the clothiers will be the first to get the consumer's dollars.

Wool manufacturers are not blessed with a lot of surplus wealth, but that should not be offered as an excuse for refusing to invest money in a perfectly sound plan, in a determined effort to put the industry on an enduring and profitable basis. In recent years, losses sustained by the mills have run to many millions of dollars. Surely it is worth the effort to spend a few hundred thousand dollars to recoup part of this tremendous loss. Experience another two or three years, similar to the last ten years, and there'll be nothing left to dissipate. The cooperation of the entire wool piece goods industry is necessary. With conditions as they are, no single company is financially able to carry the whole burden.

Money Saved, Useful Data Supplied, Quality Improved, by Systematic Maintenance

By Earle L. Milliken

◆ *Mr. Milliken has had 19 years' experience of executive responsibility in electric light and power, electric railway, gas, bus, and rayon and silk textile fields. He brings a broad view to textiles and knows the results of systematic maintenance from first hand.*

EMERGENCY maintenance is expensive. There is a loss of production at the time it is most needed. The effect on operating personnel of frequent machine breakdowns is detrimental to quality and stifles enthusiasm for the job. The ounce of prevention is in this respect worth many pounds of cure. Systematic anticipatory maintenance is particularly adaptable to textile machinery which at times is operated continuously for days and even weeks at a time on "rush" orders.

The older the machinery that must be operated, the greater the need for a projected maintenance schedule. There is something about old machinery that is conducive to neglect. It is the same characteristic that makes the owner of a new motor car lavish upon it every possible care at the time it needs it the least.

High-grade products cannot consistently be made on poorly maintained equipment. In a textile plant it is suicidal to attempt on run-down machinery to make high-grade goods which are to be subjected to critical inspection. When maintenance ceases, certainty of quality is lost.

Unfortunately in the urge for quick profits (which in a period of intense competition must come primarily from reduced production costs) maintenance is too frequently deferred. The saving in production cost, particularly on old machinery that may have suffered from the "quick results" policy of a succession of supervisory heads, is eventually offset by allowances and adjustments in the settlement of claims for defective goods.

In some cases where ample maintenance appropriations are allowed the organization for maintenance, work is not such as to give the best returns for the money spent. Maintenance of machinery is a mechanics job and is better supervised by the mechanical department. Once a machine is put in condition through the replacement or repair of worn parts it can then be turned over to the production department for tuning up and operation.

The two functions of maintenance and operation are not advantageously combined. The man responsible for production from any piece of equipment is likely to skimp the time and material necessary to do a good maintenance job. He wants it for operation at the earliest possible moment and this need too often prompts forgetting the similar probable need at all times in the future.

Systematic maintenance is an outcome of the engineering viewpoint applied to industry. The true engineer builds always for the future. He has ever in mind the economic balance—what will a given sum invested in any particular case return in dollars, or prevent future loss in dollars, in a given period. Against this is the viewpoint of the opportunist—so much can be saved at once without regard for what may be necessary to expend in the future through failure to spend wisely today.

The regular inspections of equipment units by trained and capable mechanics shows up any weaknesses in their design or construction, and furnishes a basis for more intelligent future purchases of like equipment. Manufacturers of equipment are eager to eliminate such faults but can do so only if the user passes along well-thought-out suggestions for improvement. The user many times unfairly criticizes the manufacturer of a machine when it breaks down or refuses to function properly. In a majority of such instances the user has not properly maintained it. Regular inspection of a machine and its performance alone can demonstrate its inherent weaknesses or defects.

Inspections and overhauling of equipment on schedule give rise to many questions on the part of the maintenance gang and its supervisor. Comparison of results of an inspection today with those recorded at the times of the previous ones develop in their minds the whens, hows and wherefores that are individually the forerunners of progress and improvement.

A maintenance log is a prerequisite of any maintenance system. It is not enough to put equipment in condition. For future guidance events must be recorded. If a given part made of one material shows by the record a too frequent breakage, judgment prompts making it of some other stronger material. If bearings wear out faster than is deemed proper, bearing metals and lubricants used on them come in for study. Only by records enabling actual trend of repair part costs can such changes be intelligently and economically made.

Changes in parts of and accessories to machines are too often made on the basis of generalities rather than of facts. Where data showing the actual life of equipment not in terms of weeks, months or years but rather definitively on the basis of number of picks, pounds produced, machine hours operated, total yards produced between changes, or any other common denominator, then personalities enter least into judgments. Such data knows no favorite and future purchases are sure to return the most for every dollar spent.

No management or supervisory staff in charge of a plant that has not had the benefit of systematic anticipatory maintenance can be sure of the mechanical condition of its equipment at all times. A survey of machine conditions in nine cases out of ten will show the need for a general overhauling and demonstrate clearly the value of a regular maintenance schedule. When such is finally in effect the management can breathe easy and be assured that the machinery will stand the strain of a long quality run without excessive stoppages for repairs.

Annual Exhibit at N. C. State College—

Prize Winners

Student Executives and Their Dean

Features Original Fabric Designs

WIDELY different types of cotton and rayon-cotton fabrics were exhibited in garments entered in the annual style show and textile exposition of the North Carolina State College Textile School, in Raleigh, N. C., April 15, which was held in connection with the spring meeting of the Eastern Carolina Division of the Southern Textile Association.

The exhibition room contained examples of spray printing, fancy half hose, yarns of various descriptions and a wide variety of fabrics. Students demonstrated the various operations in carding, spinning, weaving, knitting and dyeing.

Coats, coat suits, sports suits, dresses, beach pajamas and negligees, made from cotton and rayon fabrics designed and woven in the textile school by students, were modeled by 77 young women from several women's colleges in North Carolina. Miss Nell York, a student of Meredith College, of Raleigh, was awarded the grand prize, for a coat made from a green and white figured double plain fabric, designed and woven by J. P. Garrison, Belmont, N. C., and F. L. Wilson, Bakersville, N. C., both students of the textile school. The group of prize winners are shown in the accompanying picture. Left to right they are as follows: Miss Kearney K. Smith of Salisbury, who represented Catawba College; fabric by B. M. McConnell and J. H. Gardner; Miss Ellen Matthews of Sanford, who represented Louisburg College; fabric by E. W. Grow, Jr.; Miss Nell York of Cary, a Meredith student, who won the Grand Prize; fabric by J. P. Garrison and F. L. Wilson; Miss Estelle Farris of Raleigh, who represented Meredith College; fabric by F. B. Singletary; Miss Blanche Coley of Stantonsburg, who represented Queens-Chicora College; fabric by W. Adams and E. B. Caldwell, Jr.; Miss Anna Green of Raleigh, who represented Peace Junior College; fabric by P. H. Burrus and J. Y. Bass.

All the above except the first named, wore costumes wholly of cotton. Miss Smith's costume was of cotton and rayon.

The group of textile school students shown above comprises those who had charge of the schools various departments during the day. From left to right they are as follows: J. A. Duncan, Raleigh; E. W. Freeze, Jr., High Point; J. L. Padgett, Cliffside; C. N. Cone, Jr., Greensboro; Dean Thomas Nelson, State College; K. A. Bridges, Griffin, Ga.; J. B. Lamar, Spray; J. E. Gill, Henderson; N. R. Whitener, Gastonia; M. A. Law, Paw Creek; A. H. Willis, Raleigh; E. W. Crow, Mocksville.

Marvin A. Law, of Paw Creek, N. C., was presented the Sigma Tau Sigma award for the highest average among the seniors of the textile school at the annual scholarship day exercises held April 13. Other students making high honors were James H. Barnhardt, Charlotte, N. C., and R. P. Warren, Snow Hill, N. C.

"TYPP" . . . . *A Basis for N*

THE accompanying yarn-number conversion table is, we believe, the most complete compilation of its kind available anywhere. It appeared originally in the booklet known as "Simplex Tables," formerly published by TEXTILE WORLD, and was almost entirely responsible for the large demand which that little volume enjoyed. Since the booklet is now out of print and a new edition of the entire work does not appear to be desired, it has been decided to publish the table in the magazine itself, where it may enter promptly into the service of the entire industry. It is so important to men in all branches of textile work that we should be guilty of criminal negligence if we did not make it again available in some form.

A study of this table supplies food for thought on a matter which frequently, we have no doubt, arises in the minds of most textile workers; viz., the absolute absurdity of there being a separate numbering system for each type of yarn. In some instances we find more than one system for one type, as in the case of woolen, which is numbered by the run, cut, and grain in this country and by other units in other countries. After all, the same purpose is served by each system; viz., the designation of the yarn weight per unit of length, no matter whether we consider the principle of the fixed weight or of the fixed length. This weight is a rough key to the yarn diameter — although apparently few textile men concern themselves directly with that fact. One system could just as well be used for all yarns; and in this age, when any type of yarn is likely to be used in a fabric with any other, a universal system would be very helpful.

Of course, universal systems have been proposed. If the metric system of weights and measures had been accepted throughout the world, some yarn-numbering system based upon it might have been generally adopted. As it is, the word "metric" seems to confound the uninitiated; and many who are familiar with it conscientiously question the value of the weights-and-measures system which it designates. Books have been written for and

YARN-NUMBER CONVERSION TABLE

The column headed "linen" also serves for other bast-fiber yarns and for the woolen cut.

The grain weight for 12 yd. can be easily obtained by moving the decimal point one place to the left in the grain weight for 120 yd.

The grain weight for the following lengths can be easily obtained from the grain weight for 100 yd.

(*a*) For 50 yd., by dividing by 2.
(*b*) For 20 yd., by dividing by 5.
(*c*) for 25 yd., by dividing by 4.
(*d*) For 12½ yd., by dividing by 8.
(*e*) For 10 yd., by dividing by 10.
(*f*) For 1 yd., by dividing by 100.

In the metric system 496 yd. per pound is the American equivalent of 1 kilometer per kilogram.

Runs 1600 yd. per lb.	Cotton 840 yd. per lb.	Worsted 560 yd. per lb.	Linen 300 yd. per lb.	Yards per lb.	Grains per 120 yd.	Grains per 100 yd.	Drams per 1,000 yd.	Denier .05 gram per 450 meters	Metric 496 yd. per lb.
.125	.24	.36	.67	200	4,200	3,500	1,280	22,323	.4
.19	.36	.54	1.	300	2,800	2,333⅓	853⅓	14,882	.6
.25	.48	.71	1.33	400	2,100	1,750	640	11,161	.8
.35	.67	1.	1.87	560	1,500	1,250	457.14	7,972	1.1
.375	.71	1.07	2.	600	1,400	1,166⅔	426.66	7,441	1.2
.50	.95	1.43	2.67	800	1,050	875	320	5,581	1.6
.525	1.	1.50	2.80	840	1,000	833⅓	304.76	5,315	1.7
.56	1.07	1.61	3.	900	933.3	777.8	284.44	4,961	1.8
.63	1.19	1.79	3.33	1,000	840	700	256	4,465	2.
.70	1.33	2.	3.73	1,120	750	625	228.57	3,986	2.3
.75	1.43	2.14	4.	1,200	700	583.3	213.33	3,720	2.4
.88	1.67	2.50	4.67	1,400	600	500	182.86	3,189	2.8
.94	1.79	2.68	5.	1,500	560	466.7	170.67	2,976	3.
1.	1.90	2.86	5.33	1,600	525	437.5	160	2,790	3.2
1.05	2.	3.	5.60	1,680	500	416.7	152.38	2,657	3.4
1.13	2.14	3.21	6.	1,800	466.7	388.9	142.22	2,480	3.6
1.25	2.38	3.57	6.67	2,000	420	350	128	2,232	4.
1.31	2.50	3.75	7.	2,100	400	333.3	121.90	2,126	4.2
1.38	2.62	3.93	7.33	2,200	381.8	318.2	116.36	2,029	4.4
1.40	2.67	4.	7.47	2,240	375	312.5	114.28	1,993	4.5
1.50	2.86	4.29	8.	2,400	350	291.7	106.67	1,860	4.8
1.57	3.	4.50	8.40	2,520	333.3	277.8	101.59	1,772	5.1
1.63	3.10	4.64	8.67	2,600	323.1	269.2	98.46	1,717	5.2
1.69	3.21	4.82	9.	2,700	311.1	259.3	94.81	1,654	5.4
1.75	3.33	5.	9.50	2,800	300	250	91.43	1,595	5.6
1.88	3.57	5.36	10.	3,000	280	233.3	85.33	1,488	6.1
2.	3.81	5.72	10.67	3,200	262.5	218.7	80	1,395	6.5
2.06	3.93	5.89	11.	3,300	254.5	212.1	77.58	1,353	6.7
2.10	4.	6.	11.20	3,360	250	208.3	76.19	1,329	6.8
2.13	4.05	6.07	11.33	3,400	247.1	205.9	75.29	1,313	6.9
2.25	4.28	6.43	12.	3,600	233.3	194.4	71.11	1,240	7.3
2.26	4.33	6.50	12.13	3,640	230.8	192.3	70.33	1,227	7.3
2.36	4.50	6.75	12.60	3,780	222.2	185.2	67.72	1,181	7.6
2.38	4.52	6.79	12.67	3,800	221.1	184.2	67.37	1,175	7.7
2.44	4.64	6.96	13.	3,900	215.4	179.5	65.64	1,145	7.9
2.45	4.67	7.	13.07	3,920	214.3	178.6	65.30	1,139	7.9
2.50	4.76	7.14	13.33	4,000	210	175	64	1,116	8.1
2.54	4.83	7.25	13.53	4,060	206.9	172.4	63.05	1,100	8.2
2.63	5.	7.50	14.	4,200	200	166.7	60.95	1,063	8.5
2.71	5.17	7.75	14.47	4,340	193.5	161.3	58.99	1,029	8.8
2.75	5.24	7.86	14.67	4,400	190.9	159.1	58.18	1,015	8.9
2.76	5.25	7.88	14.70	4,410	190.5	158.7	58.05	1,012	8.9
2.80	5.33	8.	14.93	4,480	187.5	156.3	57.14	997	9.
2.81	5.36	8.04	15.	4,500	186.7	155.6	56.89	993	9.1
2.88	5.48	8.21	15.33	4,600	182.6	152.2	55.65	971	9.3
2.89	5.50	8.25	15.40	4,620	181.8	151.5	55.41	966	9.3
2.97	5.67	8.50	15.87	4,760	176.5	147.1	53.78	938	9.6
3.	5.72	8.57	16.	4,800	175	145.8	53.33	930	9.7
3.02	5.75	8.63	16.10	4,830	173.9	144.9	53	924	9.7
3.06	5.83	8.75	16.33	4,900	171.4	142.9	52.24	911	9.9
3.13	5.95	8.93	16.67	5,000	168	140	51.20	893	10.1
3.15	6.	9.	16.80	5,040	166.7	138.9	50.79	886	10.2
3.19	6.07	9.11	17.	5,100	164.7	137.2	50.19	875	10.3
3.24	6.17	9.25	17.27	5,180	162.2	135.1	49.42	862	10.4
3.25	6.19	9.29	17.33	5,200	161.5	134.6	49.23	859	10.5
3.28	6.25	9.38	17.50	5,250	160	133.3	48.76	850	10.6
3.32	6.33	9.50	17.73	5,320	157.9	131.6	48.12	839	10.7
3.38	6.43	9.64	18.	5,400	155.6	129.6	47.40	827	10.9
3.41	6.50	9.75	18.20	5,460	153.8	128.2	46.89	818	11
3.50	6.67	10.	18.67	5,600	150	125	45.71	797	11.3
3.54	6.75	10.13	18.90	5,670	148.1	123.5	45.15	787	11.4
3.56	6.79	10.18	19.	5,700	147.4	122.8	44.91	783	11.5
3.63	6.90	10.36	19.33	5,800	144.8	120.7	44.14	770	11.7
3.67	7.	10.50	19.60	5,880	142.9	119	43.54	759	11.9
3.75	7.14	10.71	20.	6,000	140	116.7	42.67	744	12.1
3.81	7.25	10.88	20.30	6,090	137.9	114.9	42.04	733	12.3
3.85	7.33	11.	20.53	6,160	136.4	113.6	41.56	725	12.4
3.88	7.38	11.07	20.67	6,200	135.5	112.9	41.29	720	12.5
3.94	7.50	11.25	21.	6,300	133.3	111.1	40.63	709	12.7
4.	7.62	11.43	21.33	6,400	131.2	109.4	40	698	12.9

Table compiled

...or Numbering all Yarns

By Edwin D. Fowle
Associate Editor, TEXTILE WORLD

YARN-NUMBER CONVERSION TABLE

Runs 1600 yd. per lb.	Cotton 840 yd. per lb.	Worsted 560 yd. per lb.	Linen 300 yd. per lb.	Yards per lb.	Grains per 120 yd.	Grains per 100 yd.	Drams per 1,000 yd.	Denier .05 gram per 450 meters	Metric 496 yd. per lb.
4.03	7.67	11.50	21.47	6,440	130.4	108.5	39.75	693	13
4.07	7.75	11.63	21.70	6,510	129	107.2	39.32	686	13.1
4.13	7.86	11.79	22.	6,600	127.3	106.1	38.79	676	13.3
4.20	8.	12.	22.40	6,720	125	104.2	38.09	664	13.5
4.25	8.10	12.14	22.67	6,800	123.5	102.9	37.65	657	13.7
4.31	8.21	12.32	23.	6,900	121.7	101.5	37.10	647	13.9
4.33	8.25	12.38	23.10	6,930	121.2	101	36.94	644	14
4.38	8.33	12.50	23.33	7,000	120	100	36.57	638	14.1
4.46	8.50	12.75	23.47	7,140	117.6	98	35.85	625	14.4
4.50	8.57	12.86	24.	7,200	116.7	97.2	35.56	620	14.5
4.55	8.67	13.	24.27	7,280	115.4	96.2	35.17	613	14.7
4.59	8.75	13.13	24.50	7,350	114.3	95.2	34.83	607	14.8
4.69	8.93	13.39	25.	7,500	112	93.3	34.13	595	15.1
4.73	9.	13.50	25.20	7,560	111.1	92.6	33.86	591	15.2
4.75	9.05	13.57	25.33	7,600	110.5	92.1	33.68	587	15.3
4.88	9.29	13.93	26.	7,800	107.7	89.8	32.82	572	15.7
4.90	9.33	14.	26.13	7,840	107.1	89.3	32.65	569	15.8
4.99	9.50	14.25	26.60	7,980	105.3	87.7	32.08	560	16.1
5.	9.52	14.29	26.67	8,000	105	87.5	32	558	16.1
5.06	9.64	14.46	27.	8,100	103.7	86.4	31.60	551	16.3
5.08	9.67	14.50	27.07	8,120	103.4	86.2	31.53	550	16.4
5.25	10.	15.	28.	8,400	100	83.3	30.48	532	16.9
5.43	10.33	15.50	28.93	8,680	96.8	80.7	29.49	514	17.5
5.44	10.36	15.54	29.	8,700	96.6	80.5	29.43	513	17.5
5.50	10.48	15.71	29.33	8,800	95.5	79.6	29.09	507	17.7
5.51	10.50	15.75	29.40	8,820	95.2	79.4	29.02	506	17.8
5.60	10.67	16.	29.87	8,960	93.8	78.1	28.57	498	18.1
5.63	10.71	16.07	30.	9,000	93.3	77.8	28.44	496	18.1
5.75	10.95	16.43	30.67	9,200	91.3	76.1	27.83	485	18.5
5.78	11.	16.50	30.80	9,240	90.9	75.8	27.70	483	18.6
5.81	11.07	16.60	31.	9,300	90.3	75.3	27.53	480	18.7
5.96	11.33	17.	31.73	9,520	88.2	73.5	26.89	469	19.2
6.	11.43	17.14	32.	9,600	87.5	72.9	26.67	465	19.3
6.04	11.50	17.25	32.20	9,660	87	72.5	26.50	462	19.5
6.19	11.79	17.68	33.	9,900	84.8	70.7	25.85	451	20
6.25	11.90	17.86	33.33	10,000	84	70	25.60	446	20.1
6.30	12.	18.	33.60	10,080	83.3	69.4	25.40	443	20.3
6.38	12.14	18.21	34.	10,200	82.4	68.6	25.10	438	20.6
6.50	12.38	18.57	34.67	10,400	80.8	67.3	24.62	429	21
6.56	12.50	18.75	35.	10,500	80	66.7	24.38	425	21.2
6.65	12.67	19.	35.47	10,640	78.9	65.8	24.06	420	21.4
6.75	12.86	19.29	36.	10,800	77.8	64.8	23.70	413	21.8
6.83	13.	19.50	36.40	10,920	76.9	64.1	23.44	409	22
6.94	13.21	19.82	37.	11,100	75.7	63.1	23.06	402	22.4
7.	13.33	20.	37.33	11,200	75	62.5	22.86	399	22.6
7.09	13.50	20.25	37.80	11,340	74.1	61.7	22.57	394	22.9
7.13	13.57	20.35	38.	11,400	73.7	61.4	22.46	392	23
7.25	13.81	20.21	38.67	11,600	72.4	60.3	22.07	385	23.4
7.31	13.93	20.89	39.	11,700	71.8	59.8	21.88	382	23.6
7.35	14.	21.	39.20	11,760	71.4	59.5	21.77	380	23.7
7.50	14.29	21.43	40.	12,000	70	58.3	21.33	372	24.2
7.69	14.64	21.96	41.	12,300	68.3	56.9	20.81	363	24.8
7.70	14.67	22.	41.07	12,320	68.2	56.8	20.78	362	24.8
7.75	14.76	22.15	41.33	12,400	67.7	56.5	20.65	360	25
7.88	15.	22.50	42.	12,600	66.7	55.6	20.32	354	25.4
8.	15.24	22.86	42.67	12,800	65.6	54.7	20	349	25.8
8.05	15.33	23.	42.93	12,880	65.2	54.4	19.88	347	26
8.06	15.36	23.04	43.	12,900	65.1	54.3	19.85	346	26
8.25	15.71	23.57	44.	13,200	63.6	53	19.39	338	26.6
8.40	16.	24.	44.80	13,440	62.5	52.1	19.05	332	27.1
8.44	16.07	24.11	45.	13,500	62.2	51.9	18.96	331	27.2
8.50	16.19	24.29	45.33	13,600	61.8	51.5	18.82	328	27.4
8.63	16.43	24.64	46.	13,800	60.9	50.7	18.55	324	27.8
8.75	16.67	25.	46.67	14,000	60	50	18.29	319	28.2
8.81	16.79	25.18	47.	14,100	59.6	49.6	18.16	317	28.4
8.93	17.	25.50	47.60	14,280	58.8	49	17.93	313	28.8
9.	17.14	25.71	48.	14,400	58.3	48.6	17.77	310	29
9.10	17.33	26.	48.53	14,560	57.7	48.1	17.58	307	29.3
9.19	17.50	26.25	49.	14,700	57.1	47.6	17.41	304	29.6
9.25	17.62	26.43	49.33	14,800	56.8	47.3	17.30	302	29.8
9.38	17.86	26.79	50.	15,000	56	46.7	17.07	298	30.2
9.45	18.	27.	50.40	15,120	55.6	46.3	16.93	295	30.5
9.50	18.10	27.14	50.67	15,200	55.3	46.1	16.84	294	30.6
9.56	18.21	27.32	51.	15,300	54.9	45.8	16.73	292	30.8
9.75	18.57	27.86	52.	15,600	53.8	44.9	16.41	286	31.4
9.80	18.67	28.	52.27	15,680	53.6	44.6	16.33	285	31.6
9.94	18.81	28.21	53.	15,900	52.8	44	16.10	281	32.1
9.98	19.	28.50	53.20	15,960	52.6	43.9	16.04	280	32.2
10.	19.05	28.57	53.33	16,000	52.5	43.8	16	279	32.2
10.13	19.29	28.93	54.	16,200	51.9	43.2	15.80	276	32.7
10.15	19.33	29.	54.13	16,240	51.7	43.1	15.76	275	32.7
10.31	19.64	29.46	55.	16,500	50.9	42.4	15.52	271	33.2
10.50	20.	30.	56.	16,800	50	41.6	15.24	266	33.9
10.69	20.36	30.54	57.	17,100	49.1	40.9	14.97	261	34.5
10.85	20.67	31.	57.87	17,360	48.4	40.3	14.75	257	35

by Samuel S. Dale

against the adoption of the metric system in this country.

It is evident that no universal numbering system will ever be adopted which differs radically from those at present in use or which is not readily understandable by the average textile man. For the establishment of such a system it is essential that some relation between length and weight which is familiar to all textile calculators be selected as the basis. Such a relation is not hanks, skeins, cuts, runs, leas, or deniers—it is the yards per pound. All yarns of the same "size" (a term meaning weight—not diameter, except by implication) have the same number of yards per pound. This figure is the common meeting place of all yarns. It is also the bridge by which we cross from one numbering system to another. In other respects it is the actual, though somewhat concealed, foundation on which all of the fixed-weight systems are built, and is in a sense the reciprocal of the basis under the fixed-length systems; i.e., the pounds (or other units of weight) per yard. Therefore, if one mill will specify the "size" of a yarn in yards per pound, every other mill will understand what it is talking about.

An objection to the proposed system which will occur to some lies in the fact that the number of yards per pound is an unwieldy figure, having usually five digits. This objection can readily be overcome by moving the decimal point three places to the left. Then a yarn running 40,000 yd. to the pound becomes a 40s yarn, rather than a 40,000s.

In realitiy what we are expressing by the "40s" is the number of thousands of yards per pound. A yarn running 36,960 yd. per lb. becomes a 36.96s yarn. It would not be necessary to use more than two decimal places; and if the new system should become generally adopted, mills would eventually standardize to a certain extent on numbers which do not have decimals—just as they have done with their present systems.

Of course, by moving the decimal point three places to the left, what we are actually doing is establishing a fixed-weight system based on a length

of 1,000 yd. per pound in a No. 1 yarn. By the seemingly roundabout manner in which this thesis has been developed, it has not been intended to give the impression that it involves a radical departure from present ideas of yarn numbering. In fact, if there is to be any hope whatever of a universal system being adopted, no such departure can be made. It has been intended by the manner of introducing this proposal to show how logical and desirable the 1,000-yd. unit would be as a basis. Although we are introducing merely a new unit, it is one which can be readily converted into the familiar yards per pound by mentally slipping a decimal point three places to the right. Hence it is not only advantageous as the basis for a universal system, but would be found by almost any branch of the industry to be more workable than the basis at present in use. It is important to note in this connection that Putnam Spinners, Inc., Putnam, Conn., has already proposed a 1,000-yd. unit for numbering spun rayon.

The unit must be given a distinctive name in order that there will be no doubt as to what system is being referred to. The name should afford a simple key to the real meaning of the unit. Such a key is certainly not given by the terms "hank," "skein," "run," "cut," "lea," etc. We suggest the name "typp" (pronounced "tip"), which is compounded from the initials of the words "thousand yards per pound." Hence a 30-typp yarn runs 30,000 yd. to the pound. This designation has the advantage of being both distinctive and expressive. Possibly in practice we can drop one of the "p's," but the short pronounciation of the "i" should be retained in order that in conversation there may be no confusion between the typp of yarn and the type of yarn. We can conceive of no serious confusion between the terms "typp" and "tip," because there would seldom be occasion for using both terms in the same discussion; and, even if they were so used, their meanings would undoubtedly be clear from the wording of the conversation.

We anticipate objections, of course. In the first place, it will be argued that experienced textile men would find it very difficult to adapt themselves to the new unit. Yarn numbers would create no mental picture as to the actual diameter of the yarn. Old calculations, records, and specifications would have to be interpreted in terms of the new method. A man would have to stop and think twice before he designated by number the size of yarn he happened to have in mind.

We admit all these things, but feel that the same objections would be raised against any universal system which might be proposed and that they would be the least serious in the case of this particular system. After all, the idea of establishing a universal system is not new; we are merely recommending one which we believe would be the easiest to adopt. Most textile men know how to convert their yarn numbers into yards per pound; and that is all which is necessary to find the "typp" equivalent of any hank, skein, run, cut, lea, or denier of a present system.

Most yarn-number conversion tables, such as the accompanying, include a column for yards per pound.

YARN-NUMBER CONVERSION TABLE

Runs 1600 yd. per lb.	Cotton 840 yd. per lb.	Worsted 560 yd. per lb.	Linen 300 yd. per lb.	Yards per lb.	Grains per 120 yd.	Grains per 100 yd.	Drams per 1,000 yd.	Denier .05 gram per 450 meters	Metric 496 yd. per lb.
10.88	20.71	31.07	**58.**	17,400	48.2	40.2	14.71	257	35.1
11.	20.95	31.43	58.67	17,600	47.7	39.8	14.55	254	35.5
11.03	**21.**	31.50	58.80	17,640	47.6	39.7	14.51	253	35.6
11.06	21.07	31.61	**59.**	17,700	47.5	39.5	14.46	252	35.7
11.20	21.33	**32.**	59.40	17,920	46.9	39	14.29	249	36.1
11.25	21.43	32.14	**60.**	18,000	46.7	38.9	14.22	248	36.3
11.44	21.79	32.68	**61.**	18,300	45.4	38.3	13.99	244	36.9
11.50	21.90	32.86	61.33	18,400	45.7	38	13.91	243	37.1
11.55	**22.**	**33.**	61.60	18,480	45.5	37.9	13.85	242	37.3
11.63	22.14	33.21	**62.**	18,600	45.2	37.6	13.76	240	37.5
11.81	22.50	33.75	**63.**	18,900	44.4	37	13.54	236	38.1
11.90	22.67	**34.**	63.47	19,040	44.1	36.8	13.45	235	38.4
12.	22.86	34.29	**64.**	19,200	43.8	36.5	13.33	233	38.7
12.07	**23.**	34.50	64.40	19,320	43.5	36.2	13.25	231	38.9
12.19	23.21	34.82	**65.**	19,500	43.1	35.9	13.13	229	39.3
12.25	23.33	**35.**	65.33	19,600	42.9	35.7	13.06	228	39.5
12.38	23.57	35.36	**66.**	19,800	42.4	35.4	12.93	226	39.9
12.50	23.81	35.71	66.67	20,000	42	35	12.80	223	40.2
12.56	23.93	35.89	**67.**	20,100	41.8	34.8	12.74	222	40.5
12.60	**24.**	**36.**	67.20	20,160	41.7	34.7	12.70	221	40.6
12.75	24.29	36.43	**68.**	20,400	41.2	34.3	12.55	219	41.1
12.94	24.64	36.96	**69.**	20,700	40.6	33.8	12.37	216	41.7
12.95	24.67	**37.**	69.07	20,720	40.6	33.8	12.36	216	41.8
13.	24.76	37.14	69.33	20,800	40.4	33.7	12.31	215	41.9
13.13	**25.**	37.50	**70.**	21,000	40	33.3	12.19	213	42.3
13.30	25.33	**38.**	70.93	21,280	39.5	32.9	12.03	210	42.9
13.31	25.36	38.04	**71.**	21,300	39.4	32.9	12.02	210	42.9
13.50	25.71	38.57	**72.**	21,600	38.9	32.4	11.85	207	43.5
13.65	**26.**	**39.**	72.80	21,840	38.5	32	11.72	204	44
13.69	26.07	39.11	**73.**	21,900	38.4	32	11.69	204	44.2
13.88	26.43	39.64	**74.**	22,200	37.8	31.5	11.53	201	44.8
14.	26.67	**40.**	74.67	22,400	37.5	31.2	11.43	199	45.2
14.06	26.79	40.18	**75.**	22,500	37.3	31.1	11.38	198	45.4
14.18	**27.**	40.50	75.60	22,680	37	30.9	11.20	197	45.7
14.25	27.14	40.72	**76.**	22,800	36.8	30.7	11.23	196	46
14.35	27.33	**41.**	76.53	22,960	36.6	30.5	11.15	194	46.3
14.44	27.50	41.25	**77.**	23,100	36.4	30.3	11.08	193	46.6
14.63	27.86	41.79	**78.**	23,400	35.9	29.9	10.94	191	47.2
14.70	**28.**	**42.**	78.40	23,520	35.7	29.8	10.88	190	47.4
14.81	28.21	42.32	**79.**	23,700	35.4	29.5	10.80	188	47.8
15.	28.57	42.86	**80.**	24,000	35	29.2	10.67	186	48.4
15.05	28.67	**43.**	80.27	24,080	34.9	29.1	10.63	185	48.5
15.19	28.78	43.18	**81.**	24,300	34.6	28.8	10.53	184	49.
15.23	**29.**	43.50	81.20	24,360	34.5	28.7	10.51	183	49.1
15.38	29.29	43.93	**82.**	24,600	34.1	28.5	10.41	182	49.6
15.40	29.33	**44.**	82.13	24,640	34.1	28.4	10.39	181	49.7
15.75	**30.**	**45.**	**84.**	25,200	33.3	27.8	10.16	177	50.8
16.	30.48	45.71	85.33	25,600	32.8	27.3	10.	174	51.6
16.10	30.67	**46.**	85.87	25,760	32.6	27.2	9.94	173	51.9
16.13	30.71	46.07	**86.**	25,800	32.6	27.1	9.92	173	52.
16.27	**31.**	46.50	86.80	26,040	32.3	26.9	9.83	171	52.5
16.50	31.43	47.14	**88.**	26,400	31.8	26.5	9.70	169	53.2
16.80	**32.**	**48.**	89.60	26,880	31.3	26	9.52	166	54.2
16.88	32.14	48.21	**90.**	27,000	31.1	25.9	9.48	165	54.4
17.	32.38	48.57	90.67	27,200	30.9	25.7	9.41	164	54.8
17.25	32.86	49.29	**92.**	27,600	30.4	25.4	9.28	162	55.6
17.32	**33.**	49.50	92.40	27,720	30.3	25.3	9.24	161	55.9
17.50	33.33	**50.**	93.33	28,000	30	25	9.14	159	56.5
17.63	33.57	50.36	**94.**	28,200	29.8	24.8	9.08	158	56.8
17.85	**34.**	**51.**	95.20	28,560	29.4	24.5	8.96	156	57.6
18.	34.29	51.43	**96.**	28,800	29.2	24.3	8.89	155	58.1
18.20	34.67	**52.**	97.07	29,120	28.8	24	8.79	153	58.7
18.38	**35.**	52.50	**98.**	29,400	28.6	23.8	8.71	152	59.3
18.75	35.71	53.57	**100.**	30,000	28	23.3	8.53	149	60.5
18.90	**36.**	**54.**	100.80	30,240	27.8	23.1	8.47	148	61
19.	36.19	54.29	101.33	30,400	27.6	23	8.42	147	61.3
19.42	**37.**	55.50	103.60	31,080	27	22.5	8.24	144	62.6
19.50	37.14	55.72	**104**	31,200	26.9	22.4	8.21	143	62.9
19.60	37.33	**56.**	104.53	31,360	26.8	22.3	8.16	142	63.2
19.95	**38.**	**57.**	106.40	31,920	26.3	21.9	8.02	140	64.3
20.	38.10	57.14	106.67	32,000	26.3	21.9	8	140	64.4
20.25	38.57	57.86	**108.**	32,400	25.9	21.6	7.90	138	65.3
20.30	38.67	**58.**	108.27	32,480	25.9	21.6	7.88	138	65.5
20.47	**39.**	58.50	109.20	32,760	25.6	21.4	7.81	136	66
21.	**40.**	**60.**	**112.**	33,600	25	20.8	7.62	133	67.7
21.52	**41.**	61.50	114.80	34,440	24.4	20.3	7.43	130	69.4
21.70	41.33	**62.**	115.73	34,720	24.2	20.2	7.37	129	70
21.75	41.43	62.14	**116.**	34,800	24.1	20.1	7.36	128	70.2
22.	41.90	62.86	117.33	35,200	23.9	19.9	7.27	127	71
22.05	**42.**	**63.**	117.60	35,280	23.8	19.8	7.26	127	71.1
22.40	42.67	**64.**	119.47	35,840	23.4	19.5	7.14	125	72.3
22.50	42.86	64.29	**120.**	36,000	23.3	19.4	7.11	124	72.6
22.57	**43.**	64.50	120.40	36,120	23.3	19.4	7.09	124	72.8
23.	43.81	65.71	122.67	36,800	22.8	19	6.96	121	74.2
23.10	**44.**	**66.**	123.20	36,960	22.7	18.9	6.93	121	74.5

Table compiled

Hence no new conversion tables would have to be compiled. The few new calculations involved by the adoption of a 1,000-yd. standard are simple—indeed more simple than the calculations which they would replace. For example, the present cotton system involves the following calculation for determining the number of a yarn from the weight of a yarn sample:

$$\frac{\text{Length in yards} \times 7{,}000}{\text{Weight in grains} \times 840} = \text{Yarn number}$$

Under the "typp" system this becomes the following:

$$\frac{\text{Length in yards} \times 7{,}000}{\text{Weight in grains} \times 1{,}000} = \text{Yarn number}$$

Hence the familiar constant 8.33 used so extensively to represent 7,000/840 would be superseded by the more workable constant 7, representing 7,000/1,000. Greatest simplicity in this calculation would be obtained by reeling a sizing skein of 100 yd. for yarn and one of 10 yd. for roving, as Putnam Spinners, Inc., has suggested for spun rayon. All that would then be required is the division of 700 or 70 by the weight in grains.

Users of the fixed-length systems, such as the denier for silk and rayon, would be confused by the fact that a high number would indicate a fine yarn; and a low number, a coarse yarn. This also cannot be denied; but unfortunately any universal system must be based either on a fixed weight or a fixed length, and no matter which basis is selected one group of textile men must be favored more than the other. Hence, in order that the confusion will be as slight as possible, it is necessary to select the basis which is familiar to the greater number of people. Unquestionably this is the fixed weight, employed by the cotton, woolen, worsted, and flax branches.

It cannot be denied that the fixed-weight idea is probably the outgrowth of comparatively primitive methods of weighing, in which it is more difficult to vary weights by gradual steps than to vary lengths. It is also true that the fixed-length system now seems in many respects more workable. Nevertheless, the necessity of making any universal system as little disrupting to present conceptions as possible outweighs the disadvantages of the fixed weight. Expressing of yarn sizes in yards per pound is by no means unfamiliar to the fixed-length man.

Even if our proposed system were adopted only by the fixed-weight group, much would be accomplished; as differences and hence confusion among some of the major branches of the industry would be eliminated. Also, the fixed-length man would find a unification among the fixed-weight systems helpful for conversion purposes.

Many experienced men will consider any attempt to establish a universal yarn-numbering system as futile. It will possibly be so until several textile associations with sufficient influence to change established practices take an interest in the matter. When Committee D-13, the textile committee of the American Society for Testing Materials, is the factor in the industry which it will eventually become, it can assist materially in establishing simplified practice such as this.

YARN-NUMBER CONVERSION TABLE

Runs 1600 yd. per lb.	Cotton 840 yd. per lb.	Worsted 560 yd. per lb.	Linen 300 yd. per lb.	Yards per lb.	Grains per 120 yd.	Grains per 100 yd.	Drams per 1,000 yd.	Denier .05 gram per 450 meters	Metric 496 yd. per lb.
23.25	44.29	66.43	124.	37,200	22.6	18.8	6.88	120	75
23.62	45.	67.50	126.	37,800	22.2	18.5	6.77	118	76.2
23.80	45.33	68.	126.93	38,080	22.1	18.4	6.72	117	76.8
24.	45.71	68.57	128.	38,400	21.9	18.2	6.67	116	77.4
24.15	46.	69.	128.80	38,640	21.7	18.1	6.63	115	77.9
24.50	46.67	70.	130.67	39,200	21.4	17.9	6.53	114	79
24.67	47.	70.50	131.60	39,480	21.3	17.7	6.48	113	79.6
24.75	47.14	70.72	132.	39,600	21.2	17.7	6.46	113	79.8
25.	47.62	71.43	133.33	40,000	21	17.5	6.40	112	80.6
25.20	48.	72.	134.40	40,320	20.8	17.4	6.35	111	81.3
25.50	48.57	72.86	136.	40,800	20.6	17.2	6.27	109	82.2
25.72	49.	73.50	137.20	41,160	20.4	17	6.22	108	83
25.90	49.33	74.	138.13	41,440	20.3	16.9	6.18	108	83.5
26.	49.52	74.29	138.67	41,600	20.2	16.8	6.15	107	83.9
26.25	50.	75.	140.	42,000	20	16.7	6.10	106	84.7
26.60	50.67	76.	141.87	42,560	19.7	16.4	6.01	105	85.8
26.77	51.	76.50	142.80	42,840	19.6	16.3	5.98	104	86.4
27	51.43	77.14	144.	43,200	19.4	16.2	5.93	103	87.1
27.30	52.	78.	145.60	43,680	19.2	16	5.86	102	88.1
27.75	52.86	79.29	148.	44,400	18.9	15.8	5.76	101	89.5
27.82	53.	79.50	148.40	44,520	18.9	15.7	5.75	100	89.7
28.	53.33	80.	149.33	44,800	18.7	15.6	5.71	100	90.3
28.35	54.	81.	151.20	45,360	18.5	15.4	5.64	98	91.4
28.50	54.29	81.43	152.	45,600	18.4	15.4	5.61	98	91.9
28.70	54.67	82.	153.07	45,920	18.3	15.2	5.57	97	92.6
28.87	55.	82.50	154.	46,200	18.2	15.2	5.54	97	93.1
29.	55.24	82.86	154.67	46,400	18.1	15.1	5.51	96	93.5
29.25	55.71	83.57	156.	46,800	17.9	15	5.47	95	94.3
29.40	56.	84.	156.80	47,040	17.8	14.9	5.44	95	94.8
29.92	57.	85.50	159.60	47,880	17.5	14.6	5.34	93	96.5
30.	57.14	85.71	160.	48,000	17.5	14.6	5.33	93	96.8
30.20	57.33	86.	160.53	48,160	17.4	14.5	5.31	93	97.1
30.45	58.	87.	162.40	48,720	17.2	14.4	5.25	92	98.2
30.75	58.57	87.86	164.	49,200	17.1	14.2	5.20	91	99.2
30.80	58.67	88.	164.27	49,280	17	14.2	5.19	91	99.3
30.97	59.	88.50	165.20	49,560	17	14.1	5.16	90	99.9
31.	59.05	88.57	165.33	49,600	16.9	14.1	5.16	90	100
31.50	60.	90.	168.	50,400	16.7	13.9	5.07	89	101.6
32.	60.95	91.43	170.67	51,200	16.4	13.7	5	87	103.2
32.02	61.	91.50	170.80	51,240	16.4	13.7	4.99	87	103.3
32.20	61.33	92.	171.73	51,520	16.3	13.6	4.96	87	103.9
32.25	61.43	92.14	172.	51,600	16.3	13.6	4.96	87	104
32.55	62.	93.	173.60	52,080	16.1	13.4	4.91	86	105
32.90	62.67	94.	175.47	52,640	16	13.3	4.86	85	106.1
33.	62.86	94.28	176.	52,800	15.9	13.3	4.84	85	106.4
33.07	63.	94.50	176.40	52,920	15.9	13.2	4.83	84	106.7
33.60	64.	96.	179.20	53,760	15.6	13	4.76	83	108.4
33.75	64.28	96.42	180.	54,000	15.6	13	4.74	83	108.9
34.	64.76	97.18	181.33	54,400	15.4	12.9	4.70	82	109.7
34.12	65.	97.50	182.	54,600	15.4	12.8	4.68	82	110.1
34.30	65.33	98	182.93	54,880	15.3	12.8	4.66	81	110.6
34.50	65.71	98.57	184.	55,200	15.2	12.7	4.63	81	111.3
34.65	66.	99.	184.80	55,440	15.2	12.6	4.61	80	111.8
35.	66.67	100.	186.67	56,000	15	12.5	4.57	80	112.9
35.17	67.	100.50	187.60	56,280	14.9	12.4	4.54	79	113.5
35.25	67.14	100.71	188.	56,400	14.9	12.4	4.53	79	113.7
35.70	68.	102.	190.40	57,120	14.7	12.3	4.48	78	115.1
36.	68.57	102.86	192.	57,600	14.6	12.2	4.44	78	116.1
36.22	69.	103.50	193.20	57,960	14.5	12.1	4.41	77	116.8
36.40	69.33	104.	194.13	58,240	14.4	12	4.39	77	117.4
36.75	70	105.	196.	58,800	14.3	11.9	4.35	76	118.5
37.	70.47	105.71	197.33	59,200	14.2	11.8	4.32	75	119.3
37.10	70.67	106.	197.87	59,360	14.1	11.8	4.31	75	121.9
37.27	71.	106.50	198.80	59,640	14.1	11.7	4.29	75	120.2
37.50	71.42	107.12	200.	60,000	14	11.7	4.26	74	121
37.80	72.	108.	201.60	60,480	13.9	11.6	4.23	74	121.9
38.	72.38	108.57	202.67	60,800	13.8	11.5	4.21	73	122.6
38.25	72.86	109.28	204.	61,200	13.7	11.4	4.18	73	123.4
38.82	73.	109.50	204.40	61,320	13.7	11.4	4.17	73	123.6
38.50	73.33	110.	205.33	61,600	13.6	11.4	4.15	72	124.2
38.85	74.	111.	207.20	62,160	13.5	11.3	4.11	72	125.3
39.	74.28	111.43	208.	62,400	13.4	11.2	4.10	72	125.8
39.20	74.67	112.	209.07	62,720	13.4	11.2	4.08	71	126.4
39.37	75.	112.50	210.	63,000	13.3	11.1	4.06	71	127
39.75	75.71	113.57	212.	63,600	13.2	11	4.02	70	128.2
39.90	76.	114.	212.80	63,840	13.2	11	4.01	70	128.7
40.	76.19	114.29	213.33	64,000	13.1	10.9	4	70	129.
40.42	77.	115.50	215.60	64,680	13	10.8	3.95	69	130.4
40.50	77.14	115.71	216.	64,800	13	10.8	3.95	69	130.6
40.60	77.33	116.	216.53	64,960	12.9	10.8	3.94	69	131
40.95	78.	117.	218.40	65,520	12.8	10.7	3.90	68	132.1
41.	78.09	117.14	218.67	65,600	12.8	10.7	3.90	68	132.2
41.25	78.58	117.86	220.	66,000	12.7	10.6	3.87	68	133.1
41.30	78.67	118.	220.27	66,080	12.7	10.6	3.87	67	133.2
42.	80.	120.	224.	67,200	12.5	10.4	3.80	66	135.5

by Samuel S. Dale

Cotton Mixes . . . One-Process Pickers Card Clothing . . . . . Roller Covering

Discussed by S.T.A. at Raleigh

BLENDING of raw stock, the practicability of converting two- and three-process picking to single-process, and other problems relating to carding and spinning were considered at the spring meeting of the Eastern Carolina Division of the Southern Textile Association, held at North Carolina State College, Raleigh, N. C., April 15. More than 75 members and visitors attended the meeting, which was in charge of T. W. Mullen, Roanoke Rapids, N. C., president of the association.

Following the invocation by George F. Brietz, superintendent, Selma (N.C.) Cotton Mills, an address of welcome was delivered by Thomas Nelson, dean of the State College Textile School, who described the school's research facilities available for textile mills. In addition to chemical and physical research laboratories, Dean Nelson stated that the school maintains a special testing room in which experiments and tests may be run on straight spinning and on the three kinds of long-draft spinning.

The plan under which the Southern Textile Association is being reorganized was described by President Mullen. He said that a decision had been reached by the board of governors to establish divisions in the organization, similar in character to the Eastern Carolina Division, and to have in each division sections for the discussion of the problems of spinning, weaving, carding, etc. This plan is intended to form more compact units and thus make attendance at meetings more convenient for members of the association. It is planned to increase the dues to $3 per year for everybody and to reduce the dues of associate members. One dollar of each member's dues will be turned over to his division. President Mullen also stated that the semi-annual meeting of the association will probably be discontinued, except possibly every other year, when it will be held in connection with the Southern Textile Exposition at Greenville, S. C.

E. M. Holt, superintendent, Erwin Cotton Mills Co., Plant No. 4, West Durham, N. C., was elected chairman of the division, succeeding D. F. Burns, general superintendent (Durham, N. C.) Hosiery Mills, whose term had expired. Other divisional officers elected at the meeting were D. F. Lanier, superintendent, Oxford (N. C.) Cotton Mills, vice-chairman; and M. R. Harden, superintendent, Erwin Cotton Mills Co., Plant No. 1, of West Durham, secretary.

Single-Process Picking

Discussion of card-room problems was under the leadership of M. R. Vick, overseer of carding, Rosemary Mfg. Co., Roanoke Rapids, N. C. The first subject for consideration was the practicability of making single-process picking out of two- and three-process equipment. E. M. Holt described a method of hook-up of two-process pickers into one-process that had proved satisfactory. Instead of hoppers, cones were used — five cones where ordinarily three cones would be used if the pickers were not hooked up. "The way they are hooked up," Mr. Holt pointed out, "is that each evener is free to even within itself on its particular section; but the last evener, or the evener on the finisher, is so arranged that when it evens (that is, when it lightens or heavies) it imposes the same thing all the way through back to the hopper. In other words, as the belt shifts and the small end of the cone slows up the speed, then it slows up the speed of the driving cones on the other process. Our loss of laps is about *2%*."

In order to make this type of installation work successfully, Mr. Holt was of the opinion that plenty of ball bearings should be used to take the load off the cones, because, without the intermediate hopper, an extra load is carried. In reply to questions, Mr. Holt stated that there was a considerable saving in labor, but also an economy in production, resulting from less loss in laps. Another saving was found in power consumption.

Chairman Vick asked if Mr. Holt could give figures on the cost of connecting up pickers into the one-process arrangement. Although exact figures could not be recalled, Mr. Holt estimated the cost, exclusive of labor of making the installation, at $160 per machine. It required about one week to make the change-over.

C. S. Tatum, agent, Pilot Mills, Raleigh, N. C., asked if there were any disadvantages in the method of hook-up described by Mr. Holt. The reply was: "Well, there might be some little variation from yard to yard, or within one yard as compared with another, but we have not been able to find it. The disadvantage I see in the whole thing is in hooking it up; if you don't take the load off your cone belts, if you tie it up so it cannot play, the result is awful."

Blending Raw Stock

Chairman Vick stated that the possibility of saving floor space appealed to him. He was satisfied that with the hook-up the yard-per-yard lap will be just as good. The question of blending dyed raw stock was then considered. Mr. Vick said that in running colored stock on single-process picking, he had found that where the dye produced the right shade, the correct blend was obtained, but that the shade could not be changed. Where ten or twelve bales are opened and a dye of ten or twelve bales is made and opened at one time, it was said that a fairly good blend could be obtained, provided

the operative feeds the hopper from each bale. Another member stated that single-process picking is rather difficult to clean out and therefore not satisfactory for running several colors.

An engineering concern, according to J. W. Cates, superintendent, Edenton (N. C.) Cotton Mills, has advocated blending either white or colored stock in a series of hoppers instead of single bale-breakers. James W. Bradbury, consulting engineer, Riverside & Dan River Cotton Mills, Danville, Va., and Textile Development Co., Greensboro, N. C., had the following to say in reply to Mr. Cates' remarks:

"We have put in this system in ten countries in Europe, in Canada, and in a number of States in the United States. We have recommended this for five years. A bale-breaker will blend from four to five bales; I do not care how many bales you lay down on the floor, you get only four or five bales in the blend. In using these hoppers, you set four bales in front of each. The cotton drops onto an apron and goes to the cleaning machinery from the apron. In order to get your blend and an even yarn, it is necessary to blend in your opening a little more than you are doing at the present time. That really does away with the four laps on the finisher picker."

In reply to a question, Mr. Bradbury stated that the Aldrich hook-up for converting three-process into one-process picking is very good. With the one-process picker he has found that below 13½ oz. on picker laps an even lap cannot be obtained.

Chairman Vick was of the opinion that the single-process does not clean so well as the three-process but that it leaves the cotton in better condition and the card can then clean the stock better than in the case of the three-process arrangement. In the end the stock comes out just as clean as in the three-process system. It was thought quite possible that a heavier lap with more drafting on the cards might produce evener work.

J. W. Mullen, who described new plans of S.T.A.

Straight-Wire and Metallic Covering

The next subject for discussion was the relative advantages and disadvantages of straight-wire and metallic card clothing. Mr. Bradbury was of the opinion that success with straight-wire clothing depends upon the type of fabric manufactured, and that he would not recommend it in cases where cleanliness is a primary consideration. His observation also was that work made on metallic clothing shows up rather neppy. Mr. Tatum had the same experience with metallic clothing.

G. C. Truslow, general superintendent, Draper American & Wearwell Sheeting Mills, Carolina Cotton & Woolen Mills Co., Draper, N. C., stated that his organization has one card that has been running with metallic clothing, night and day, for two years. Results have been splendid, according to Mr. Truslow, who said that the card had been run as long as a week, night and day, and when it was stripped with a roller, less than ½ oz. of strips was obtained. The product—in this case, sheeting—was comparatively free from neps.

In discussing the question of setting top and bottom rolls on roving frames, Chairman Vick was of the opinion that $\frac{1}{16}$-in. variation in staple length can be handled with leather rolls, but that when there is as much as $\frac{1}{8}$-in. variation, an adjustment of the steel roll should be made.

Roller Coverings

The spinning discussion was led by J. W. Cates, superintendent of the Edenton (N. C.) Cotton Mills, who stated that the first question would be on the relative merits of sheepskin, calfskin, and cork-covered rolls in spinning.

The advantage of calfskin over sheepskin, according to Mr. Harden, appeared to be in the lasting qualities. The principal objection to calfskin-covered rolls was that eye-brows occur more frequently and the top rolls must be picked more often. The cork roll does not cause any eye-brows. Mr. Harden feels that either cork or calfskin would be superior to sheepskin in so far as cost and lasting qualities are concerned. One disadvantage in cork on the over-sized roll has been found to be that the rolls have to be set too wide apart. Another disadvantage of cork is that the flute on the steel roll over night will make an imprint on the cork similar to that on the leather roll. In the morning, until about 8 or 9 o'clock, there will be more ends down on cork than on leather-covered rolls. Mr. Harden stated, however, that cork has an advantage over leather in so far as cost is concerned.

J. V. McCombs, general superintendent, Randolph Mills, Franklinville, N. C., stated that his experience with calfskin rolls has been very successful, running on numbers as high as 60s. His method is to cover the roll with calfskin and then buff it with a very fine emery. The roll is then painted with a special solution which, when the solution is worn off, makes the cover elastic and eliminates trouble from eye-brows. He had figured out that calfskins cost about 30% more than sheepskins. Mr. Harden, on the other hand, stated that there is not nearly so much waste per skin, or in square feet, if large-sized calfskins are used, and that these large calfskins figure out just as cheap as sheepskins in the cost of covering a given number of spinning rolls.

L. B. Crouch, overseer of spinning, Rosemary Mfg. Co., Roanoke Rapids, N. C., declared that he prefers the cork roll to anything he has ever used for roll covering, as it produces no eye-brows and gives as good breaking strength and an evener yarn. Mr. Harte stated that he used cork rolls for about a year and a half and could find no appreciable gain in breaking strength.

The last question was, is it practicable to regrind worn whorls on spinning spindles? One member stated that he ground down the whorls in a 10,000-spindle mill and found it very satisfactory. The whorls were ground down a sixteenth. The cost was 12c. per spindle. Carl R. Harris, of Erwin Cotton Mills Co., stated that he did not believe it paid to grind down whorls on spinning spindles. Mr. Harris stated that he tested the difference in twist between a new spindle and a spindle that was worn and found about three-fourths of a number difference in twist multiple. State College cooperated.

Silk Hosiery Loses, Rayon Gains, *1930-1931 Report Shows*

SOME quality hosiery divisions suffered considerably during the depression, while the low-priced branches held their own and sometimes even increased their sales, according to a report just made public by the Bureau of the Census of the Department of Commerce. This report is based on a survey of the hosiery industry for the two years, 1930 and 1931, and comprises statistics supplied by 282 identical establishments. A slight decline in net shipments during 1931 as against 1930 is shown in men's full-fashioned, women's full-fashioned, and athletic hosiery. The production of all-wool (woolen and worsted) hosiery, all classes, suffered a decisive drop, the comparative figures being: for 1930, 315,495 doz. pairs against 257,067 doz. pairs in 1931. The production of pure thread silk, all classes also showed a sharp decline.

Manufacturers of the lower-priced merchandise gained during the two years, however; the 1931 figures showed increases for men's seamless, boys', misses and children's, and all-cotton hosiery. Most significant was the rise in output of rayon hosiery, all classes, from 5,936,930 doz. pairs in 1930 to 6,906,233 doz. pairs in 1931.

Taking the hosiery industry as a whole, there was no marked drop in demand during 1931, the report shows. Net shipments of all kinds and grades of hosiery totaled 50,541,210 doz. pr. in 1931 compared with 51,465,726 doz. pr. in 1930. Orders booked in 1931 were 51,092,441 doz. pr. compared with 50,678,220 doz. pr. in 1930, and cancellations were 16% less. Stocks on hand at the end of 1931 were less than 9,000,000 doz. pr., a decrease of 11% in comparison with stocks a year before. The only increase in stocks is in men's full-fashioned hose. All other classes show decreases, particularly women's full-fashioned.

The report comments further:

"Price reductions late in 1930 and in 1931 intensified the hand-to-mouth buying policy of retailers, resulting in a steady decrease in unfilled orders, which totaled 1,956,495 doz. pr. at the end of 1931 in comparison with 4,982,164 doz. pr. at the end of January, 1930. Price also caused a shift in demand, with seamless hose in greater relative demand than in the previous year. Production of women's seamless rayon increased about 20% and men's seamless rayon about 40%, in comparison with decreases in pure thread silk in all classifications. Mixtures of silk and rayon, and silk and wool, show marked decreases in production, whereas women's silk and cotton mixed increased 33%. Mixtures of rayon and cotton increased in most classifications and particularly in women's seamless hosiery. In contrast, marked decreases are noted in women's triple mixtures and in nearly all styles of infants and athletic hose."

Men's full-fashioned hose, according to the report, decreased both in shipments and production; whereas, men's seamless increased in both production and shipment. Orders were booked during 1931 for more pairs of men's seamless than in the preceding year and cancellations were less. Stocks on hand dropped nearly 10%.

The report proceeds:

"No similar condition exists with reference to women's hosiery. Women's full-fashioned shows decreases in manufacture, orders booked, and shipments, although women's seamless hosiery shows practically no change in 1931 in comparison with 1930.

"Boys', misses' and children's hose show an actual increase in orders booked and shipments, with practically the same quantity manufactured; however, there is a resulting decrease in stocks on hand at the end of the year.

"Infants' hose shows a decrease in all factors except the quantity of orders booked. Athletic hose shows a decrease in all factors, with total net shipments for the year practically unchanged. It is significant that practically the only classification which shows an increase, offsetting the various decreases in other classifications, is that of boys', misses' and children's hose."

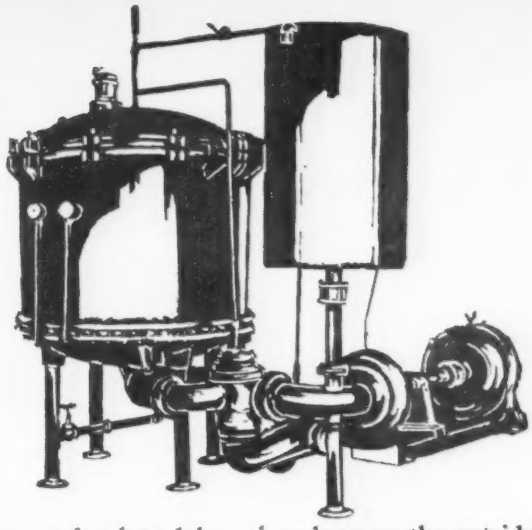
The report presents statistics on net shipments, unfilled orders, cancellations, orders booked, total amount of stocks on hand at the close of the year, and production by various classes and grades of hosiery. The output of mills contributing figures to the survey amounted to approximately 67% of the total value of hosiery manufactured in the United States, as reported in the biennial Census of Manufactures for 1929.

Table I—Summary of Hosiery Knit, Orders Booked, Net Shipments and Unfilled Orders

Year and Month	Hosiery Knit	Orders Booked	Net Shipments	Unfilled Orders End of Month
1930				
January	4,731,414	3,955,352	3,989,495	4,982,164
February	4,375,167	3,716,704	3,953,320	4,640,921
March	4,300,278	3,954,636	4,243,725	4,264,090
April	4,225,664	4,286,581	4,261,303	4,177,661
May	4,101,518	4,390,136	4,182,362	4,305,962
June	3,898,485	3,980,380	3,871,853	4,162,898
July	3,389,296	3,264,023	3,369,955	3,979,022
August	3,580,029	3,851,781	3,999,030	3,725,918
September	4,241,823	5,015,482	4,982,362	3,683,493
October	4,999,779	5,568,117	5,406,379	3,721,974
November	4,583,113	4,891,843	4,980,326	3,469,045
December	4,039,186	3,803,185	4,225,616	2,786,502
Total (Year)	50,465,752	50,678,220	51,465,726	.....
1931				
January	3,840,779	3,911,464	3,565,231	2,965,607
February	3,847,761	4,139,755	4,027,199	2,976,545
March	4,113,782	4,564,089	4,587,034	2,862,215
April	4,216,831	4,447,334	4,522,374	2,693,102
May	4,307,733	4,600,227	4,330,661	2,890,545
June	4,207,014	4,287,038	4,156,793	2,902,696
July	3,775,809	3,719,158	3,466,990	2,964,495
August	3,895,093	3,960,175	4,145,260	2,697,639
September	4,142,655	4,382,568	4,543,330	2,446,757
October	4,367,571	4,697,118	4,742,261	2,281,843
November	4,089,439	4,517,431	4,385,316	2,305,654
December	3,839,797	3,866,084	4,068,761	1,956,495
Total (Year)	48,644,264	51,092,441	50,541,210	.....

Vat-Color Dyeing

In Pressure Machines



By Dexter Kneeland

Bates Mfg. Co., Lewiston, Me.

IN DYEING vat colors in a pressure machine of the Franklin type the first consideration is the package to be dyed. In fact, we believe that the condition of the package is responsible for the greater part of the success in dyeing. There are various things to be considered as regards the package to be dyed.

Twist is very important, in our opinion. When one goes beyond 4½ times the square, we have found it much more difficult to get generally good results. The wind which we have found most satisfactory for single yarn requires 2 turns to traverse a 6-in. package. We are using a little more open wind for 2-ply yarns, and find that it works quite satisfactorily—1¼ turns to traverse a 6-in. package.

The density of the package is likewise important. If one grasps a package with both hands, it should be possible to press thumbs into package quite readily. The diameter of the package is without doubt a matter that might involve considerable discussion. We have dyed successfully packages of 5 in. in diameter and weighing approximately 1¾ lb. net, not with all colors or all depths, but for several numbers. We have standardized on the 4¾ in. diameter package for coarse yarn; *i. e.*, from 10s to 30s, and on the 4¼ in. package from 40s to 80s. Our packages are all 6 in. long, although there are a good many 3 in. packages being dyed elsewhere. There are a few colors which we find it convenient to dye on 3½-in. packages.

The square-end package, in our opinion, is the best insurance against the appearance of dark rings at the ends; and also if there are any particles of insoluble matter, they will tend to be distributed throughout the exposed surfaces, instead of being trapped between the ends of the packages.

For the preparation of the yarn before dyeing we have found that a 15 to 20-min. boil, using 4 lb. of peroxide, 2 lb. of silicate, and 4 lb. of caustic soda to a 500-lb. machine is quite satisfactory for our work.

The next step is to make up the dye, usually in one barrel, sometimes two or three if necessary, in order to be able to strain through cheese cloth. Some dyes, for example the Indanthrene browns, are strained through a thin layer of bleached cotton. The bath is sharpened, as usual, with a little caustic soda and hydrosulphite, plus 1 to 2% of a penetrating agent, and glue when necessary, at the dyeing temperature. The dye is added in one portion, except in a few cases, such as for vat black or Hydron blues, circulation is commenced, usually ½ min. on the outside, 1 min. on the inside, repeated four times, then run for ½ to 1 hr.—½ as long on the outside as the inside. When the dyeing is completed the machine is drained; some of the darker colors are given a hydrosulphite rinse; the majority are immediately given a run in warm perborate, then soaped and washed, with a softening agent added to the last wash for fine yarns.

When dyeing vat black or Hydron blues, the yarn is given the usual prepare, and the machine is then filled with water at 175° F. for black, or 160° F. for the Hydron blues. One quarter of the hydrosulphite and caustic soda is put in the machine and one-quarter of the dye previously mixed with hot water. The first portion is run 17 min. and the operation is repeated four times. The blues are given a hydrosulphite rinse at the end of the dyeing, then warm perborate, soaped and washed as usual. The vat black is given a hydrosulphite rinse, treated ½ hr. with perborate, washed, diazotized with 7% sulphuric acid and 4¼% sodium nitrite, calculated on the weight of the yarn, washed and finished.

We have found that the very light and very dark shades are the most troublesome. Light colors that may be obtained using dyes that will not strip readily are not very difficult. Our procedure is to dye the yarn to sample and then drop the liquor, add fresh amounts of caustic soda and hydrosulphite and run about ½ hr. at slightly lower temperature than necessary to dissolve the dye. One must be sure that the machine is absolutely clean and that there are no colored cops to give trouble. We believe that proper care in making up the dye so that it will strain readily plus proper balance of alkali and hydrosulphite, will produce satisfactory results in the case of very dark shades. One should stick as closely as possible to colors having the same exhaustion rate when dyes are used in combination. Again, one cannot be too alert as to the condition of the machines used for dyeing. There should be good sets of pressure gages on all machines. If the three-way valve becomes worn this will cause trouble. Pumps must be watched carefully, so that there will be no air sucked in through faulty stuffing boxes. Covers for holding the packages in place must be examined quite often for worn clips and also for signs of too much wear.

We have clocks equipped with charts for each extractor, in order to check the length of time extractors are run. Our dryers are all the Grinnell type with wire-meshed trays, and each dryer is equipped with a temperature regulator and chart for recording the temperature. We try to dry the yarn until it contains about 6% of moisture. If the yarn is dyed correctly and dried carefully to a certain moisture content, one will never have a complaint as to its running qualities.

*Abstract of a paper presented at the March meeting, Northern New England Section, American Association of Textile Chemists and Colorists.

Overseers' Round-Table

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago will be closed next week and a summary of contributed ideas then given.

◆

Operatives' Days-Off

Editor, Overseers' Round-Table:

IF THERE is anything that will get an overseer all riled up it is for one or more of the operators to stay out. Some people have a habit of staying out without making any arrangements with the overseer about it. They seem to think that anything they want to do is all right regardless of how the overseer is fixed. It is very annoying to have a certain piece of machinery that you need to run and then have the man who operates it lay out. I believe that if a man is sick he should try by some means to inform the overseer of his inability to work. If a man lays out just because he doesn't want to work, I believe he should be sent back the next day to rest, and if he repeats the act a second or third time he should be given about a week off. If that doesn't cure him, let him go. For an operative like that is of no benefit to a company. H. B. BECKNELL, Ranlo Mfg. Co.

Departmental Changes

Editor, Overseers' Round-Table:

I DISAGREE with Hank because I think that an overseer has a right to make changes in his own department if he feels that they are necessary and would benefit all concerned. However, if the changes fail he should be ready to accept any criticism from the super. This criticism must have a foundation and not consist of the comments of a jealous man.

Before making a change an overseer must think it over and not make any blunders. If the change will affect other departments he should talk it over with the other overseers affected. This would have to be settled at a meeting of the overseers concerned and in such a case an invitation should be sent to the super, who could either attend in person or call for a report. This would bring about cooperation.

A meeting of this sort is only necessary when the matter is very important and requires the advice of the super and other overseers. If the undertaking concerns only one department the overseer should be able to handle it himself, since he should always have his eyes open for anything that will bring about smoother running of his department.

EMIL WIATRAK, Botany Worsted Mills.

Editor, Overseers' Round-Table:

CERTAINLY YOUR overseer should make changes where he sees fit after due deliberation and thought. This seems to me to be only too obvious. Any major change or purchase of equipment must, of necessity, be O.K.'d by the management. However, if a plant is to progress it must not stand pat. It has to experiment continually and it is up to the wide-awake overseer to improve his present equipment wherever possible after consultation with the master mechanic, and also his formulas in conjunction with the

Keeping the Department R

"JUST recently," said Superintendent Chase, "I had quite an interesting discussion about mill organization with an overseer in another plant. This man said that a great deal could be gained by having a lot of the operations that have ordinarily been considered straight office work under the control of the overseer. In other words, such matters as figuring the payroll would be done under the overseer's supervision. Do you think that there is anything in the plan?"

"As your friend pointed out," Bill spoke up, "there are a great many things that an overseer can learn by being close to the figures. For example, somewhere up at the office there are figures showing the total cost of supplies for a certain department over a month's time. However, these figures are kept by some office worker who doesn't know anything about things and who would probably be pretty sore if the overseer annoyed him. There may be times when the treasurer will call for the total, but if the figuring were done by the overseer or someone under him he would have the record all the time and he could figure out how much supplies cost per unit of machinery, or whether the item was increasing or decreasing. In the same way, suppose that a boss weaver figures his own payroll from the pick counters. He certainly is more inclined to make real use of the pick figures that if he just had someone fill out a form and send it to the office. It is very important for an overseer to know all such facts as his labor cost, production, waste, etc., and I think that all such calculations should be done either by the overseer himself or by some clerk working under his control. This would not mean employing more people but only transferring the work from the main office to the mill departments."

"What Bill has just said," Pete returned, "is all very interesting but it simply isn't practical. Any overseer who really runs his department right

Records

makes very sure that he knows all the figures on labor cost, production, etc., regardless of where such records are kept. I think that any such plan would undoubtedly mean adding to the force and it is against all the principles of good management to decentralize work such as clerical work which can be done far more economically at one central point. Another point that is very worth considering is that the average overseer is not clerically minded and this rules out the possibility of having him do a fair portion of the work himself. In a lot of departments there is not enough work detail to keep a clerk busy all the time and it would turn out to be quite expensive to have clerks sitting around in each department doing nothing a fair part of the time. In fact, the more I think of the proposition the more it strikes me as being impossible to work out correctly."

◆

Do *you* believe that it is practical to have the clerical work in connection with a department done under the overseer's supervision rather than in the main office?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

plant chemist. If there is any disagreement it can be put up to the super.

After all, what are we hired for? Certainly not for the office boy's job. Then let's assume the responsibility that a real job calls for and earn our money by a saving here and an improvement there. "OLD-TIMER."

Youth vs. Years

Editor, Overseers' Round-Table:

THE TEXTILE industry, more than any other I believe, is particularly subject to the rule of "old timers," and could, in part, lay upon this fact some of the blame for the long extended depression in the industry which began years before our present business depression.

I do not say that every mature and experienced man should be replaced with an ambitious, inexperienced one, for there are positions in every mill that require, and are filled by, mature minds that may be old in years but young enough to be progressive and receptive to new ideas. But there are far too many still in the industry who hold no trust in research laboratories, quality control or time study, prefering to use the methods that their fathers and grandfathers used 50 and 70 years ago.

The day is past when the size of the profits depended entirely upon production with little thought to costs, quality, or style. A competition just as keen as is to be found in any other industry now exists in textiles and the organization that makes an effort to get its share of textile school and college graduates in order to build up a live and aggressive personnel is the one that will do the business and show the profits in the years to come.

ROBERT C. BOKUM, Mohawk Carpet Mills.

Editor, Overseers' Round-Table:

YEARS OF experience immediately cry out, "No, don't do it!" How can an inexperienced man with a paint brush compete with a modern spray gun, paint cleaning and painting equipment in the hands of skilled master painters?

It just can't be done and I consider it false judgment and charity to try to handle unemployment in such a manner. We might just as well take the idle carder or spinner and send him into the machine shop and ask him to mill up a pawl or gear; it amounts to the same thing. There are many jobs, no doubt, that the weaver or other regular help could do, such as general cleaning up of the mill buildings and grounds, but this will provide but a limited amount of work.

It would be far better to have the overhaul and repair work efficiently done and economically performed by those whose regular trade fits them for it, and take the savings thus made and put it into developing new products from the loom and aiding the salesmen to get orders. No matter how dull the times are a new pattern, a new color combination, or a novelty often goes across. Let's lick the depression by creating something the people want and sell it to them at the price they will pay. And when we are again working at full time, take a lesson from the other industries and build up an unemployment fund, the latest startling example that the world has read of being that of Sears Roebuck & Co., originated by the late Julius Rosenwald. Witness the fact of hundreds recently let go with sufficient to tide them over this long period of depression. Even a negro porter with but 14 years' service is well provided for so that for many many years he has no worry. Let's study the possibility of these various reserve unemployment funds to which we all contribute. CHAS. H. WILLEY.

◆

Summary of Discussion on Changes

About 90% of the replies stated that the overseer had the right to make changes in his department without consulting the superintendent. It was pointed out, however, that if the change was a large one it was always best to talk it over with the superintendent and that if other departments were affected it was necessary to go about the problem in a cooperative spirit. An important argument was that the overseer was responsible for his department and that he should take this responsibility.

NEWS about MEN

Donald S. Ashbrook has resigned the presidency of Bradford Dyeing Association (U.S.A.), Bradford, R. I. He has not announced his future plans.

Austin H. Carr, president of Durham (N. C.) Hosiery Mills, has been elected president of the board of the Austin-Heaton Co., flour mill, Durham.

D. B. Coltrane, president of the Kerr Bleaching & Finishing Works, Concord, N. C., has been reelected president of the Cabarrus Mutual Fire Insurance Co.

Stanley King, newly elected president of Amherst (Mass.) College, has retired as a director of the Kendall Co., Boston.

Bertrand H. H. Noble, former assistant to the president of the Amalgamated Silk Corp., New York, has been elected executive vice-president in charge of all activities of Jno. Dunlop's Sons, Inc., New York.

Gustav Oberlander, secretary-treasurer of the Berkshire Knitting Mills, Reading, Pa., and Mrs. Oberlander sailed April 15 from New York on the "Conte Grande" for a Mediterranean cruise.

William C. Harrison, treasurer of Narragansett Mills, Fall River, Mass., has resigned, effective upon election of a successor. He has been with the company for 22 years, treasurer since 1929. He will remain a director.

T. T. Smith, of Concord, N. C., has been elected secretary of Cannon Mills Co., Kannapolis, N. C., succeeding **F. J. Haywood.** All other officers have been reelected. Mr. Haywood was recently made vice-president of the Cabarrus Bank.

James A. Burke, who was superintendent of Sagamore Mfg. Co., Fall River, Mass., for a great many years, has been elected treasurer of the company, and treasurer of Border City Mfg. Co. and Foster Spinning Co. as well, to succeed the late **W. L. S. Brayton.** Mr. Burke was president of the Union Cotton Mfg. Co. before its liquidation.

T. T. Lucas has been made assistant to **K. S. Tanner,** president and treasurer of the Stonecutter Mills and treasurer of Spencer Corp., Spindale, N. C. He was formerly manager of the Pinehurst Silk Mills and was more recently connected with the Dunean Mills, Greenville, S. C.

Francis O. McDevitt, has resigned as treasurer and clerk of the Potomska Mill, New Bedford, Mass., and his place has been filled by **William O. Buzzell.** Mr. Buzzell, who recently resigned as agent of Wamsutta Mills, New Bedford, was appointed assistant treasurer of the Potomska company on March 23.

W. M. McLaurine, Charlotte, N. C., secretary of the American Cotton Manufacturers Association, has just returned to his headquarters at Charlotte from a trip through South Carolina and Georgia in the interest of National Cotton Week.

Herbert W. Wilkinson has resigned as general manager and superintendent of the Southbridge Finishing Co. and the Sturbridge Finishing Co., Southbridge, Mass., to become general manager of the Imperial Printing & Finishing Co., Providence, R. I., with which concern he was formerly connected.

Paul F. Haddock, of Charlotte, N. C., southern representative for the A. Klipstein Co., of New York, and chairman of the dyers, bleachers and finishers division of the Southern Textile Association, is recuperating at a Charlotte hospital from a sudden illness.

Rufus E. Smith, former superintendent of a branch of the Bibb Mfg. Co., Macon, Ga., has gone to the Taylor Mill of the same company at Reynolds, Ga. **W. A. Hunt,** who was overseer of mill No. 2, at Macon, has been promoted to the position of general overseer at the Crown, Star and Knitting Mills, Macon. He is succeeded as overseer of the card room by **Jamie Womack. G. Glen Toole, Jr.,** has been promoted to succeed Mr. Womack.

A. C. Gregg, former superintendent of Belmont (N. C.) Hosiery Mills, has gone to Terry Hosiery Mills, High Point, N. C.

R. H. Armfield, who was assistant superintendent of the White Oak Cotton Mills, Greensboro, N. C., has been promoted to superintendent, succeeding Thomas E. Gardner, who died April 9.

D. D. Towers, superintendent of the Anchor Duck Mills, Rome, Ga., has been elected president of the Rome Rotary club.

W. E. Evans, superintendent of Irene Mills, Spartanburg, S. C., for about nine months has resigned.

R. C. Heyward, recently resigned as superintendent of the Cutter Mfg. Co., of Rock Hill, S. C., to accept a similar position at mill No. 1 of the Entwistle Mfg. Co., Rockingham, N. C.

J. A. Sorrels, who has been connected with the Gainesville (Ga.) Cotton Mills, for 30 years, and superintendent of the Gainesville plant most recently, has retired.

William Belden, formerly connected with the Newark plant of Clark Thread Co., has been made resident manager of the Austell (Ga.) plant of that company, succeeding **J. Stoney Drake,** who recently resigned to devote his entire time to the Drake Corp.

Henry C. Robertson, senior specialist in cotton classing, Bureau of Agricultural Economics, Washington, D. C., will teach the class in cotton grading at Clemson College (S. C.) Textile School, June 6 to July 2.

J. B. Pope, who has been in the yarn department of Cannon Mills Co., Kannapolis, N. C., has been transferred to the Philadelphia office of the company.

J. C. Edwards, superintendent of the Martha Mills, division of B. F. Goodrich

Textile Calendar

Southeastern Section of American Association of Textile Chemists and Colorists, spring meeting, Auburn, Ala., April 30, 1932.

U. S. Institute of Textile Research, directors and members, New York, May 4, 1932.

Southern Textile Association, Northern North Carolina-Virginia Division, spring meeting and election of officers, King Cotton Hotel, Greensboro, N. C., May 6, 1932.

Phi Psi Annual Convention, Green Park Hotel, Blowing Rock, N. C., May 12 to 15, 1932.

Second National Cotton Week, May 16 to 21, 1932.

American Cotton Manufacturers Association, annual convention, Atlanta-Biltmore Hotel, Atlanta, May 20 and 21, 1932.

National Association of Woolen and Worsted Overseers semi-annual meeting, Rocky Point, R. I., May 31, 1932.

Philadelphia Textile School, Commencement, Philadelphia, June 2; alumni outing and dinner, June 3, 1932.

Chicago Yarn Men's Circle, 11th annual golf tournament, Nippersink Lodge, Genoa City, Wis., June 22 and 23, 1932.

American Society for Testing Materials, annual meeting, Atlantic City, N. J., June 20 to 24, 1932.

Southern Textile Association 24th annual meeting, Hendersonville, N. C., June 24 and 25.

Southern Textile Exposition Textile Hall, Greenville, S. C., Oct. 17 to 22, 1932.

Southern Textile Association, regular fall meeting, Greenville, S. C., during week of Oct. 17, 1932 (exact date to be announced later.)

National Association of Cotton Manufacturers, Boston, Oct. 26 and 27, 1932.

Co., Thomaston, Ga., has been elected a director of the Textile Operating Executives of Georgia. He succeeds George **W. Murphy,** of the Columbus (Ga.) Mfg. Co., whose term automatically expired under the six months' rotating plan.

Howard **R. Merrill** has resigned as directing head of the woolen and worsted division of Pacific Mills, Lawrence, Mass.

R. C. **Collins,** chief production engineer for American Woolen Co., has gone to the Arlington Mills, Lawrence, Mass.

J. O. **Edwards,** former superintendent of the Rhodhiss (N. C.) Mills Co., has resigned.

Thomas **Bradbury,** overseer of carding since 1915 at Wamsutta Mills, New Bedford, Mass., has been appointed superintendent in charge of manufacturing. He has worked there for the last 30 years. **William H. Marsden** has become superintendent of weaving after nine years as designer.

Hugh **Stein,** designer for the Millbrook Woolen Mills, Inc., Yantic, Conn., for the last year, has resigned and returned to his home in Hanover, Ill.

A. **Eisele,** who has had many years' experience as designer for textile mills, has become associated with the C. Sheft Studio, New York.

John **Jones,** assistant designer at Holden-Leonard Co., Bennington, Vt., has become overseer of weaving at the Russell Mfg. Corp., Pittsfield, Mass.

Homer **A. Kilburn,** associated with Pacific Mills, Lawrence, Mass., and its predecessors for 32 years, has resigned and will take vacation.

Charles **H. Ivin,** from Lawrence, Mass., has gone to Thomas Oakes & Co., Bloomfield, N. J., to be in charge of wool sorting.

Charles Pinnel, of Fred Butterworth & Co., elected president of Textile Color Card Association of the U. S.

Arthur S. Congdon, manager of the blanket department of the Pepperell Mfg. Co., Biddeford, Me., is absent on a trip to Europe.

Earl Behrens, who has represented the Stehli Silk Corp. in the Cleveland, O., territory for some time, has been transferred to Chicago, succeeding **William Tryon,** who recently resigned. Mr. Behrens will cover both territories.

C. B. Ordway, professor of chemistry and dyeing at the Alabama Polytechnic Institute at Auburn, recently visited the testing laboratory of the Calumet Cotton Mills, La Grange, Ga., and the Hillside Cotton Mills and Valway Rug Mills, with a group of students. **H. R. Adams,** manager of the laboratory, gave a short talk on the testing of yarns and fabrics.

J. F. Armstrong, who was superintendent of Rex Spinning Co., Gastonia, N. C., has become superintendent of Carolina Textile Corp., Hamer, S. C., to succeed **J. H. McDonald,** resigned.

George Brown has resigned as superintendent of the Sweetwater (Tenn.) Hosiery Mills where he has been employed for the last 13 years. He plans to become manager and part owner of an ice plant in Cleveland, Tenn.

L. W. Green, who was superintendent of the Barrow County Cotton Mills, Winder, Ga., resigned to become overseer of the carding and spinning departments at the Ora Mill Co., Shelby, N. C.

Henry B. Hazen has resigned as overseer of weaving in the Airlie Mills, Inc., Hanover, Conn.

Ralph Nothe is now automatic loomfixer at Central Worsted Mills Inc., Central Village, Conn. He was loomfixer at Holden-Leonard Co., Bennington, Vt.

William Hammel, former loomfixer at Holden-Leonard Co., Bennington, Vt., has gone to the Slingsby Mfg. Co., Ltd., Brantford, Ont., Canada.

George W. Hill, who was with Jos. R. Foster Co., Philadelphia, is now second hand in the dry finishing department at the Goshen, Va., plant of Stillwater Worsted Mills.

Noel D. White, overseer of the dyeing and finishing department of the Davenport Hosiery Mills, Inc., Chattanooga, Tenn., for more than ten years, has resigned.

Fred Eayrs has been succeeded as overseer of dyeing at Mayo Woolen Mills Co., Millbury, Mass., by **Herbert Massey,** overseer of dyeing for 18 years at Glazier Mfg. Co., South Glastonbury, Conn.

Obituary

Charles E. Mackintosh

Charles E. Mackintosh, president and treasurer of D. Mackintosh & Sons Co., Holyoke, Mass., died in his home in that city, April 18, at the age of 74. He began his work in the textile industry with the Germania Mills in Holyoke. A few years later he joined his father in developing the business of which he has been the head for many years. He was president of the Northampton Street Railway Co. and the Mechanics Saving Bank and a director of the Holyoke Street Railway Co., the Holyoke Public Library and the Holyoke Hospital, of Holyoke, and a director of the Springfield Safe Deposit & Trust Co. of Springfield. He leaves a widow; two sons, Donald G. and Malcolm E., both executives of D. Mackintosh & Sons Co., and three daughters.

Paul L. Sloan

Paul L. Sloan, 63 years old, prominent as a merchant in Nashville, Tenn., and father of George A. Sloan, president of the Cotton-Textile Institute, died at Nashville on April 18. Mr. Sloan was president of Cain-Sloan Co., dry goods, for the last 25 years.

A. Victor Victorius

A. Victor Victorius, who retired recently as president of the hosiery commission firm of A. V. Victorius & Co., now liquidating, died April 12, in New York. He was 60 years old. Funeral services were held at the Riverside Memorial Chapel, New York, and the body was cremated in Fresh Pond Crematory. While ill health compelled Mr. Victorius to relinquish his hosiery activities he retained his interest in the Paul Knitting Mills, and the Inspiration Mills; he was president of both units at the time of his death. The mills are located at Pulaski, Radford and Wytheville, Va. Mr. Victorius was born in New York City. In 1897 he founded his own firm at 311 Church Street in that city, where he engaged in the wholesale hosiery trade. He later formed A. V. Victorius & Co. which was in business for over 25 years.

Robert L. Brunet

Robert L. Brunet, president of the Woonsocket Rayon Co. and vice-president of Manville Jenckes Co., died April 15 at the Post-Graduate Hospital, New York City. He was 45 years old. Mr. Brunet was born in Virginia. He was graduated from Union College in 1909. He is survived by a widow and two children. He resided at Providence, R. I.

C. Edward Benoit

C. Edward Benoit, attorney, who was widely known in the textile industry for his work against commercial frauds, died April 12, in New York. A memorial resolution praising Mr. Benoit's career and work, was adopted April 13 by the Uptown Credit Group of the Textile Industry, affiliated with the Silk Association of America.

NEWS about MILLS

Cotton

Alabama Mills Co., Birmingham, Ala., will use the Guillet overhauling system of the Dixie Spindle & Flyer Co., Charlotte, N. C., in their plants at Aliceville, Clanton, Dadeville, Fayette, Greenville, Haleyville, Jasper, Russellville, Wetumpka and Winfield, Ala.

Clark Thread Co., Austell, Ga., has awarded contract to A. K. Adams Co., Atlanta, for construction of one-story office building, 40 x 40 ft. The building will have concrete foundations, brick veneer walls, composition roofing. A two-story residence will also be built. J. E. Sirrine & Co., Greenville, S. C., are engineers for both projects.

Consolidated Textile Corp., La Fayette, Ga., which has been closed for two weeks for installation of motors, has resumed full-time operation on day and night shifts.

Southern-Brighton Mills, Shannon, Ga., has awarded contract for addition to boiler house, one-story, 17 x 40 ft., brick, with structural steel, steel sash, gravel and tar roof, to B. F. Camp & Sons, Rome, Ga.

Berthdale Mills, Inc., McComb, Miss., are overhauling their machinery with the Dixie Spindle & Flyer Co.'s Guillet overhauling system.

***International Lace Co.'s** Gouverner (N. Y.) plant has been shut down for about two years and there are no signs just now of a reopening despite previous reports of installation of new sprinkler system.

Erwin Mills Co.'s Cooleemee (N. C.) plant is now operating on a full-time schedule after having curtailed operations for several weeks.

Phenix Mills Co., King's Mountain, N. C., has adopted a 4½-day week schedule for day working force, with 4-day week night shift.

Consolidated Textile Corp., Shelby, N. C., is running on a capacity schedule at its local Ella Division mills, with day and night working forces.

Dover Mills Co., Shelby, N. C., is running on a full time production schedule, with practically a normal working force in all departments.

Wilson (N. C.) Cotton Mills Co. has resumed production following a shutdown since last December. Employment is now being given to about 70 on a 5-day week schedule of 55 hours.

East Providence (R. I.) Mills, Inc., have taken out a permit for another one-story addition to plant on Grosvenor St., and will proceed with superstructure at once.

Laura Cotton Mills, Pawtucket, R. I., recently formed to operate a local mill, will be represented by Fred Brasco, 25 Knight St., Providence, R. I., one of the incorporators. Others interested are Lincoln S. Ferris and Joseph R. McKenna, both of Pawtucket.

*Indicates previous mention of project.

Wool

Stillwater Worsted Mill, East Woodstock, Conn., has closed down for an indefinite period. The mill has 36 looms and is a branch of Harrisville, R. I.

Tingue Mfg. Co., Seymour, Conn., maker of automobile fabrics, is continuing under direction of Louis M. Rosenbluth, receiver.

Peerless Woolen Mills, Rossville, Ga., have work in progress on a three-story, brick and steel addition, 100x300 ft., to cost about $100,000. The majority of unit will be used for manufacture.

Lannom Mfg. Co., Grinnell, Iowa, manufacturers of sporting goods, are installing a woolen mill to provide yarns for baseballs, etc. Operations will start May 15.

Chilton Co., Webster, Mass., woolen yarns, has closed for an indefinite period. Sherman L. Whipple, Jr., president and general manager has moved to Plymouth, Mass., temporarily.

Gilkey Homespun Weavers, Inc., Marion, N. C., recently established, now has daily production of 300 hand-woven rugs, which it sells direct to dealers.

Black Bear Woolen Mills, Inc., Proctorsville, Vt., are arranging for immediate resumption of operations, following a shutdown of nearly three months.

Patons & Baldwins (Canada), Ltd., Toronto, Ont., are putting in a new Bradford system worsted spinning plant, machinery made by Prince-Smith & Stells, Ltd., Keighley, England, for which firm H. Edward Jefferson, Philadelphia, is Canadian agent.

Paton Mfg. Co., Ltd., Sherbrooke, Que., Canada, is putting in additional top dyeing machines made by the Longclose Engineering Co., Ltd., Leeds, England. H. Edward Jefferson, Philadelphia, is sole agent for Canada and the United States for Longclose company.

Knit

Walker County Hosiery Mills, La Fayette, Ga., have received several large orders for goods and are now operating at full capacity for the first time within the last year. About 100 new machines have recently been installed.

Harris Silk Hosiery Co., Springfield, Mass., has closed for an indefinite period.

Harvard Knitting Mills, Wakefield, Mass., silk hosiery and underwear manufacturers, closed down April 15 for a temporary but indefinite period. The mills are owned by **Winship, Boit & Co.** The plant normally employs about 500 girls but has been on half time for several weeks. Officials declared the mill would be closed until business conditions improved but that the selling department would continue as usual.

Firsching Knitting Mills, Utica, N. Y., have been leased to the firm of **Daniels & Co.,** New York. Equipment is now being installed at Utica.

United Globe Knitting Mills, Philadelphia. Merchandise, materials and machinery were sold at auction last week bringing a total of $21,000.

Glasgow Hosiery Corp., Reading, Pa., has purchased 16 Banner automatic golf hosiery machines.

Oakbrook Hosiery Mills, Reading, Pa. Several Karl Lieberknecht 60-gauge full-fashioned machines, bought through Louis Hirsch Textile Machines, Inc., have been received and are being erected. The purchase of these machines was reported in TEXTILE WORLD, Nov. 14, 1931. These are the finest gauge machines now operating in this country.

Howard Hosiery Mills, Sinking Spring, Pa. The large new addition started late in 1931 is now complete. It is equipped with new machinery.

Pawtucket Hosiery Co., a division of the **Contoocook Mills Corp.,** has been formally dissolved by a decree entered in Providence (R. I.) Superior Court on April 15.

Virginia Underwear Corp., Martinsville, Va., expects to add to the present floor space by 33%. Contract has been let to Finley & McCoy, local builders, for a 3-story addition.

Tru-Knit Mills, Ltd., Hamilton, Ont., Canada, which went into bankruptcy recently, was the scene of an auction.

Circle-Bar Knitting Co., Ltd., with mills at Owen Sound and Kincardine, Ont., Canada, has placed an order with Prince-Smith & Stells, Ltd., Keighley, England, for a complete dry-combed worsted spinning plant. The spinning frames, which will be of the new mule-ring type, and all other necessary machinery, including top dyeing machinery by the Longclose Engineering Co., Ltd., Leeds, England, were supplied by H. Edward Jefferson, Philadelphia, sole agent for Canada for the two English machinery firms.

Stanfield's Ltd., has now been incorporated at Victoria, B. C., as an extra-provincial British Columbia company. B.C. offices of the firm are at 365 Water Street, Vancouver, while its head offices are at Truro, Nova Scotia.

Silk

***Belding-Heminway Co.,** Putnam, Conn. Harold A. Johnston, superintendent, announced April 17 that the company's decision to consolidate all operations at Belding, Mich., had been reconsidered and that a survey would be made to determine the manufacturing facilities and tax concessions available in Putnam. The Putnam mill, which has employed 150 hands, produces machine twist and sewing silk.

Wahneta Silk Co., Catasaugua, Pa., has acquired the **W. R. Hoehn Silk Co.,** Williamsport, Pa. The Hoehn company produces pure-dye silk fabrics of high grade, thus giving the Wahneta company entrance into a new field. W. R. Hoehn, with 30 years experience as a manufacturer, will continue in active charge of the mills. The Hoehn selling organization will continue under F. W. Duffin and I. R. Schlanger, operating from the present headquarters in New York. Wahneta Silk Co. has been in business 42 years, under the continuous management of W. R. Thomas, Jr., since 1892.

Holmes Silk Co., Ridgeway, Pa. A battery of 44 machines have been installed to replace old units which have been discarded.

Dorson Silk Co., Vera Cruz, Pa., recently organized to operate a local silk mill, will be represented by Abraham Nathanson, 218 South Fourteenth St., Allentown, Pa., one of the principal incorporators. Lawrence M. Brenner, 929 Gordon St., Allentown, is also interested in new company.

Buena Vista (Va.) Textile Corp. The superintendent has received instructions from the New York office to put on full night and day shifts until further notified. The plant has been running on part time for several months.

National Silk Co. of Canada, Ltd., has been organized to take over the idle silk mills at Actonville, Que., formerly operated by the **Silk Mills of Canada, Ltd.,** recently sold. The mill will be thoroughly renovated by the new owners, represented by T. A. Cauley, Montreal, Que., and a complete silk throwing plant installed.

Manhattan Mills, Ltd., a subsidiary of **Manhattan Silks & Woolens, Ltd.,** will lease a new one-story building, 240x70 ft., at Granby, Que., which has recently been started. J. B. Langlois, Granby, has the general contract.

Rayon

Industrial Rayon Corp., Cleveland, Ohio, is running on a basis of about 75% of capacity, and expects to hold to this schedule for some weeks to come. Branch mill at Covington, Va., is on a like basis.

Finishing

***Apex-Oriental Corp.,** Paterson, N. J., is the new name of the recently merged **Apex Piece Dyeing Co.** and the **Oriental Silk Printing Co.**

Brenner Piece Dye Works, Inc., Paterson, N. J., has been organized with capital of 1,000 shares of stock, no par value, to operate a local mill. The company is headed by James Katz and Jean Elkind. It will be represented by Sidney Alexander, 5 Colt St., Paterson, attorney.

Montop Textile Co., Central Falls, R. I., has been granted a charter to conduct a dyeing and bleaching business. Ernest B. G. Piggott and Fannie L. Piggott of Pawtucket, and William Lewis of West Warwick, R. I., are the incorporators.

TEXTILE WORLD Cotton and Wool Index Numbers

COTTON INDEX NUMBERS

Date	Cotton	Yarns	Gray Goods	Colored Goods	Aver. for Cloths	Group Average
July 31, 1914	100	100	100	100	100	100
1925						
January	192	197	195	173	184	187
March	205	202	199	181	190	192
April	196	194	193	180	187	188
July	197	183	185	176	181	182
October	174	189	193	178	186	186
1926						
January	167	175	177	162	170	171
March	155	166	168	157	163	163
April	153	163	161	155	158	159
July	149	149	151	141	146	147
October	106	141	147	144	146	143
1927						
January	107	134	140	140	140	138
March	114	137	144	142	143	140
April	118	136	143	142	143	140
July	143	149	156	145	151	150
October	168	176	184	169	176	176
1928						
January	151	163	166	166	166	165
March	155	159	161	166	164	163
April	164	160	160	165	162½	162
July	174	167	165	168	166½	167
October	157	161	162	164	163	162
1929						
January	162	166	158	169	163½	164
March	170	165	160	172	166	166
April	163½	164	157	173	165	165
July	149	160	149	166	158	158
October	147	160½	155	161	158	158
1930						
January	138	149	141	157	149	149
March	120	138	130	157	144	142
April	131	139	129	156	143	142
July	105	120	119	142	130	128
October	85	110	115	125	120	117
1931						
January	82	102	107	124	115	112
March	87	102	109	125	117	113
April	82	100	106	125	116	111
July	75	97	97	120	109	105
October	50	84	76	112	94	90
1932						
January	53	78	74	102	88	85
February	55	78	80	99	89	86
March	54	77	79	99	89	85

THE downward course of the TEXTILE WORLD index numbers, which had been temporarily halted during January and February, was resumed in the third month of 1932. With the exception of colored goods, each of the indexes was lower than in February, with record lows being scored in the wool group.

The largest declines occurred in the wool series, where the buying stagnation which has been in evidence for some weeks, coupled with the near approach of new clip wools on the market, brought about recessions in values of wool and its manufactures. The raw wool index at 89 for March was off five points from the previous month's average. The top index at 102 showed a net loss of one point and worsted yarns at 122 a loss of five points. New prices named by mills on wool cloths used in this index resulted in an eight point drop in the wool goods index.

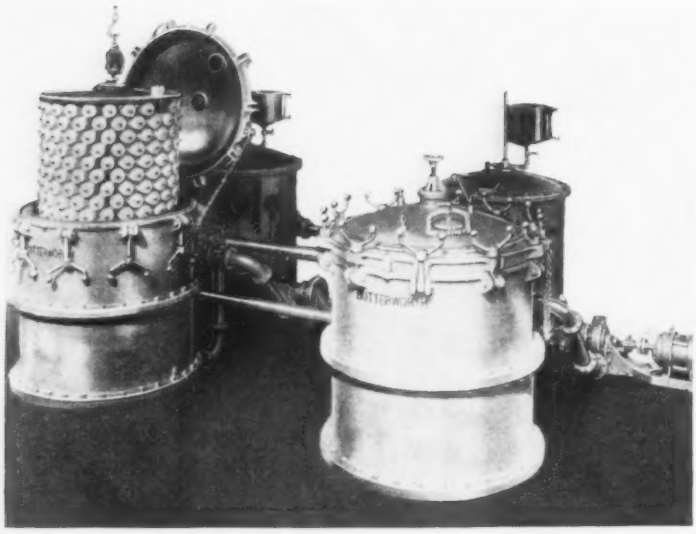
The one point decline in the March cotton average was occasioned principally by the drop in the last week of the month, the index for that week being 51, at which point it is but one point above its record low of last October. Although the yarn index was one point below February this index has shown relative stability since the first of the year. Gray goods receded one point in March following a gain of six points in February. Colored goods continued at 89, unchanged from the previous month.

Inquiries regarding interpretation and use of these index numbers may be addressed to TEXTILE WORLD, 1427 Statler Bldg., Boston, Mass.

WOOL INDEX NUMBERS

Date	Wool	Tops	Yarns	Cloth	Group Aver.
July 31, 1914	100	100	100	100	100
1925					
January	215	213	211	229	221
March	241	253	241	236	240
April	219	234	230	241	235
July	216	217	216	239	227
October	216	212	212	227	220
1926					
January	215	213	211	229	221
March	198	199	204	211	206
April	181	193	198	211	202
July	173	184	189	202	193
October	178	186	193	197	192
1927					
January	178	187	190	197	191
March	178	183	184	199	190
April	177	182	184	193	188
July	180	183	183	193	188
October	185	185	189	194	190
1928					
January	194	193	186	195	192
March	198	206	198	198	199
April	199	206	198	198	199
July	204	206	203	197	200
October	197	197	203	198	199
1929					
January	199	198	201	198	199
March	194	193	200	211	204
April	187	189	198	197	195
July	169	170	188	197	188
October	164½	169	188	197	187
1930					
January	148	161	177	197	181
March	132	144	169	202	177
April	127	139	164	186	167
July	125	135	158	184	163
October	124	135	154	180	161
1931					
January	112	127	148	178	156
March	101	112	139	174	147
April	101	112	134	167	143
July	98	111	134	162	140
October	97	108	127	147	132
1932					
January	94	104	127	147	129
February	94	103	127	145	129
March	89	102	122	137	122

New Machinery *and* Processes



Equipment for dyeing yarn in package form

Package Dyeing Machine

DYEING either from the inside out or from the outside in of yarn packages is a feature of the new ultra package-dyeing machine developed by H. W. Butterworth & Sons Co., Philadelphia, Pa.

Entire re-designing of the dyeing kier has been effected with the object of securing even pressure-current distribution over the whole length of the kier. The packages or beams are subjected to a constant spray of dye liquids, which attack the material from all sides.

The kier consists of four major parts —an inner perforated cylinder, an outside solid cylinder, the bottom, and the cover. The latter is also provided with a handy sampling device to enable the operatives to take a sample of the material to be dyed without removing the cover of the machine.

Some of the advantages claimed for this machine are: The rapidness of the flow of the dye liquor, especially from the outside in, effects a thorough leveling up of the dyeing. The distribution of the dye liquors over the entire length of the material carriers by a double-acting connection with the dye pump is an important factor in obtaining good dyeing results. The design of the tank, which is of air-tight construction, makes the machine especially adaptable for the dyeing of algol, vat, indanthrene, and naphthol colors, as well as for the general use for the dyeing of all direct or sulphur colors. A dyestuff agitator, installed inside of the by-tank, insures thorough mixing of the dyestuff before entering the dye kier itself.

Because of the fact the carriers are the only special equipment necessary for the dyeing of tops, yarn packages, beams, raw stock, card slivers, and roving, the feature of flexibility is stressed.

Loading and unloading of the various apparatus is conveniently done by an overhead running hoist or crane. A non-clogging pump is designed to insure a smooth and even flow of the dye liquors. The dye liquors are thoroughly screened before entering the kier. Production possibilities are said to range from 25 lb. to 3,600 lb. in one color or shade.

Further advantages attributed to this kier are low steam consumption, durable construction, and minimum space requirements.

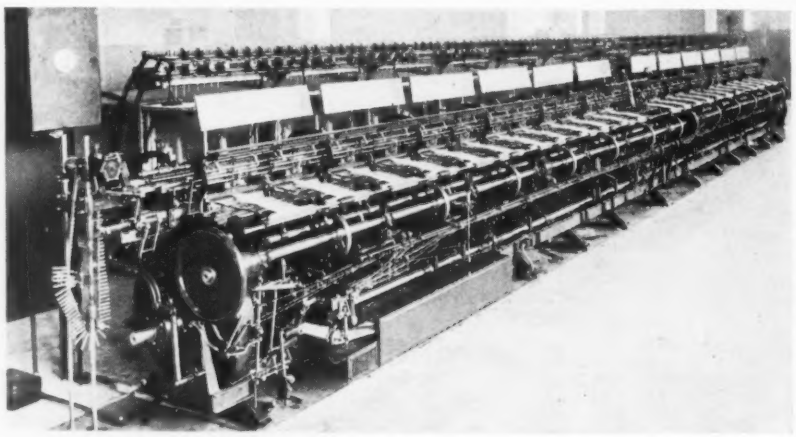
Three Full-Fashioned Hosiery Machines

THREE new full-fashioned hosiery machines are being offered to the American trade by Alfred Hofmann, Inc., West New York, N. J., representative of Schubert & Salzer, Chemnitz, Germany.

Type SSUJ is a jacquard machine which will produce any open-work pattern over the entire width of the stocking and is reported to produce at unusually high speed. When producing plain stockings, should fashion decree this, the production is declared to be almost as high as on any ordinary machine. The machine is designed to make single unit stockings, which do not have to be transferred. It makes a heel which closely approaches the appearance of a stocking made on leggers and footers. The machine can also be used either as a legger or a footer to make stockings in the usual manner with French foot or English instep.

Type HSU is a machine primarily intended for the production of plain single-unit stockings with fancy welt designs, lace clocks, etc. It produces a stocking which in appearance closely resembles the present stocking. The machine is constructed in such a manner that if it is desired it can be used as either a legger or footer to make the present stocking. This can be accomplished without difficulty and without the necessity of any mechanical changes. The speed of this machine, depending upon gauge and yarn employed, is 70 to 75 courses per minute.

Type HSF is a machine to produce



Single-unit full-fashioned hosiery machine, Type HSU, on exhibition in Alfred Hofmann plant at West New York, N. J.

the present type of stocking and is built as legger and footer. It is also built to operate at 70 to 75 courses per minute, depending upon gauge and yarn employed, and will give even greater production than the type HSL machine.

All machines contain design changes. They have been built very much sturdier than heretofore so far as frames, shafts, and other parts are concerned. They are all equipped with oil-ring bearings and ball bearings wherever advisable. All machines have individual needle bars. An interesting improvement is the hook knocking-over bar. The hook knocking-over bit gives a better closed stitch and therefore finer appearance of the fabric. The hook knocking-over bar also has the advantage that in case of a press-off, even though the operator may not disengage the particular section, there will be no loading up of the needles.

The needles, because of the greater speed, have been shortened again and are now said to be the shortest used. The jacks are entirely closed at the back and are held rigidly by a rod, for the elimination of sinker stripes. The jack springs are guided in between the jack walls. The sinker heads are made wider, and the sinkers and dividers are narrower, thereby permitting the sinkers and dividers to be held in the sinker head rigidly.

Types HSU and HSF can be furnished with a small jacquard in place of the narrowing- and lace-chain mechanism. All motions of the narrowing machine and attachment for making French heel or cradle foot are controlled from this card, as are also all automatic stops of the machine, so that the knitter has only to lock the frictions and does not need to set any chains. All that is necessary is to make enough copies of an original card for any number of machines that may be required to be changed over to another style, and this can be accomplished quickly. The shock absorbers have been materially improved and function in a manner so that the carrier rod now strikes the stop regardless of the position of the stop without jar.

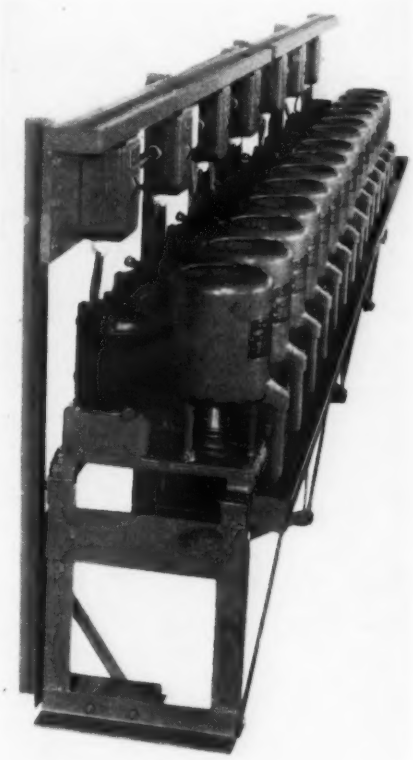
Types HSU and HSF are furnished with a universal thread-carrier mechanism which, by means of studs on chains, gives control to every carrier. It is possible by means of this attachment not only to make any desired curve of French heel and cradle foot but any pattern in the stocking such as shadow clocks, plated designs, etc.

Small Extractors for Yarn Packages

FOR removing excess moisture from yarn which has been dyed in package form, American Tool and Machine Co., Boston, Mass., has developed a machine consisting of a series of small extractors into which individual packages of yarn are placed. Any number of extractors may be used in one battery, and each has its own motor. The capacity of each extractor is one package, and the customary arrangement is one switch for a pair of units.

In each unit there is a container for the spool mounted on a vertical axis and driven through a V belt by means of a small electric motor. An extension of the spindle projects through the container to centralize the spools, and a novel method of dynamic braking is employed. The perforated baskets are usually made with an inside diameter of 5 in.

Firmly built packages require little or no external support, but soft packages will quickly deform unless supported on the outside. To meet this latter condition additional removable inner baskets have been supplied.

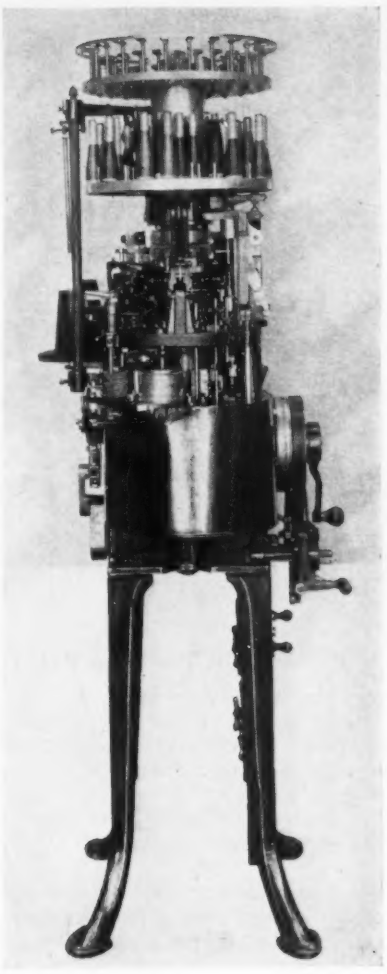


Battery of small extractors for removing excess moisture from dyed yarn packages

Variation in the type of yarn and density of the package makes a compilation of drying data difficult, but it is stated that tests on various yarns show better results than those secured by use of the average 48-in. extractor. An interesting feature is that the yarn at the core is drier than that at the periphery—a condition which would prove advantageous in oven drying. Depending on the type of yarn, concrete figures presented by the manufacturer show that spools contain from 50 to 58% of moisture on a dry-spool basis after extraction.

These figures are based on a speed of 3,600 r.p.m. for a period of 2 min. The length of cycle may be increased for added dryness where production is not paramount and the battery is small. It is declared that on a 2-min. cycle, a single operator can easily tend sixteen units.

Polyphase motors have been found most satisfactory for this type of work; and, based on the time cycle mentioned above, it was found that the average current consumption per unit is 160 watts. For a sixteen-unit battery this represents about 3½ hp.



Hosiery machine capable of using 80 colors for "embroidery" patterns

Some of the advantages which have been ascribed to this machine are as follows: Paper cores are not damaged, distortion of the packages is absent, one operator takes the place of two or three on a large machine, line surges are wiped out, failure of one or two units does not materially affect production, and small batches can be run economically.

Eighty-Wrap Circular Hosiery Machine

THE Standard-Trump Bros. Machine Co., 366 Broadway, New York, has brought out a new 80-wrap machine of the individual-needle-wrap type. A battery of 80 wrap bobbins makes possible using 80 different colors; that is, different colors on each needle in groups. The machine has 25-step pattern mechanism with trick-wheel control. It will turn out hose with high splice, double sole, and plated body, and will knit the gusset toe. Any type of wrap yarn may be used. The machine is of the revolving-cylinder, high-cylinder type.

Questions . . . *and* Answers

Bleaching in Chain Form

Technical Editor:

We should like to know if cotton filling is ever bleached in an endless chain and then transferred to filling bobbins on a chain quiller. Would this method be considerably cheaper than those employing pressure machines? (7838)..

Most manufacturers have adopted methods of bleaching pieces rather than bleaching the filling before weaving. However, this is not always possible, and in some cases the filling must be bleached before weaving.

The chain-link method is extensively used where sizable quantities of bleached filling are required. It is generally believed that this method gives a greater production with less capital investment than the process of bleaching in a pressure machine. Likewise, operating costs should be lower. The exact saving depends on the labor available, the price paid for machinery, and the speed of the operators. These factors vary in different localities.

The chain, or link, method is not so desirable for colored filling, since every time the machine stops the yarn is apt to be darker; and the color variation would be spread over such a wide area that the imperfect goods would be too numerous. There usually is so little variation in the color of white yarn, however, that this would not produce shaded or rowy goods.

▼

Rust Spots in Silk Crepe

Technical Editor:

We are enclosing sample of silk crepe showing what we believe to be rust spots. Please let us know if this is the case, and where these spots may have been caused. (7845)

We have examined the sample of crepe and find that these spots are rust stains. In our opinion this defect is caused at the throwing plant. The rust penetrates throughout the yarn and is difficult to remove. We believe that the stain is due to the fact that some bearing or spindle has been throwing oil, as our examination revealed that there were some small metallic particles present with the iron rust. These particles are worn off the bearing and adhere to the grease or oil; on the fabric they oxidize and produce rust stains.

▼

Cable Cord, Seine Twine, Trot Line

Technical Editor:

In what way does cable cord differ from seine twine? Just what is trot line?

What is the system of numbering cable cord and also seine twine? We of course understand that a No. 24, for example, in a cable cord is made from 24 ends plied together; but what we want to definitely determine is whether cable cord numbers are based on so many ends of 8s yarns or 10s yarns. Also in actual practice is cable cord made from a yarn of a different size than that which is theoretically correct and correction made in the number of ends twisted together so as to obtain the proper size? (7859)

A cable cord is composed of two or more strands of single yarn twisted together, forming a first twist. Two or more of these strands are then twisted together in the opposite direction, forming a cable, or cabled cord. This type of cord is usually made on so-called regular twisters (ring or flyer), where all twists put in the first twisting are necessarily taken out of the single yarns, and all twists put in the second or cable twisting, are necessarily taken out of the first twist, care being taken to insure a balance in the finished cord. This may be used for sewing or tying purposes, but should not be subjected to any extremely humid conditions.

Seine twine is used in the making of fishing nets. Its construction is entirely different from that of cable cord. This thread must not kink or snarl when wet out, but must retain a perfect balance under all conditions. This twine can be constructed in three or four cord. The twist in the single is very carefully figured, and the twine is made on a cable-laying machine. The single yarn revolves with the lay spindles of the machine in the same direction as the flyer that forms the twine twist. In this way the original yarn twist is maintained, and the result is a twine with sufficient yarn twist to resist any tendency of the finished twine to untwist or snarl. If a cable-laid Seine twine is required, the same procedure is followed, using a twine of two or more plies instead of single yarn.

Attempts have been made at making an imitation laid twine by putting excess twist in the single or plies on the so-called regular twisting to allow for the removal of twist in the cabling process, but the result is not altogether satisfactory.

A trot or traul line is a heavy, cabled line used for fishing purposes. The number of a cabled cord, better known as "cabled commercial cord," is intended to represent the number of strands in the cord. Theoretically a 24s is made from 24 strands of 9s cotton with around 4 to 5% contraction due to twist, making a twine measuring 900 ft. per lb. A 60s, would call for 60 strands of 9s cotton, making a twine of 360 ft. per lb. In the heavier sizes it has been found neither necessary nor practical to have such a large number of strands, as good results can be obtained by varying the size of the yarn with a smaller number of strands, using as a standard the required number of feet per pound, which is as follows: 9s—2,400, 12s—1,800, 18s—1,200, 24s—900, 36s—600, 48s—450, and 60s—360.

▼

Knitting Rayon on 45-Guage Full-Fashioned Machines

Technical Editor:

We are now experimenting on rayon on 45-gauge machines and are having good success on the leggers but run into considerable trouble in the loose-course, topping, and footing operations—especially the loose course. It appears to us that the toppers damage several filaments with the boner, thereby weakening the material and causing it to break on the footer immediately after transfer. We have heard that considerable Bemberg and other rayon is used in Germany and that they have some kind of an oil preparation into which they either dip the heels or apply in some other manner in connection with the loose coursing. Any information you can give us will be appreciated. (7836)

We may say in the outset that much preliminary preparation needs to be made on full-fashioned machines before successful knitting can be done, especially if machines have operated very long on gum silk. It will be necessary to see that needles, sinkers, dividers, and

knocking-over bits are in first-class polished condition; and where these parts have been roughened to the extent that a polishing brush and polishing compound will not remove all nicks and rough surfaces, such parts should be removed from the machine and replaced with new parts. It is also necessary to make a complete tension change on the machine in adjustments such as wicks, snappers, take-up rings, etc. We also suggest that the rayon be drawn over an oily wick which is supplied with oil from an emulsion trough or cup. A satisfactory preparation for this emulsion is a compound made up of 75% in volume of high-grade, stainless, knitting-machine oil such as is in common use in most full-fashioned mills, and 25% of winter-strain lard oil. The two oils are thoroughly agitated to make a complete mixture, and should be agitated each time before adding the emulsion to the trough.

With regard to the trouble you are having in your boner coursing, our first thought is that probably filaments have already been damaged by rough needles or sinkers prior to the boning operation, and the loosening merely magnifies the condition. This is a rather logical conclusion from the fact that, normally, heel tabs are knitted much tighter than the main fabric of the stocking, which has a natural tendency to produce broken filaments.

If you are not already doing so, we suggest making the loose course at least three wales away from selvage. We would also advise that the heel tab be made by plating rayon over cotton rather than making straight rayon heel as you have indicated. With these suggestions put into practice, along with the preliminary preparation which we have indicated above, we believe that the trouble will disappear and without any special lubrication of the heel tabs.

▼

Heavy Size Darkens Goods

Technical Editor:

Can you tell us of any size or stiffening agent on the market which will produce stiffness as per the attached sample and not discolor the original gray cloth? The appearance of the stiffened fabric is just about acceptable, but an appearance nearer to that of the gray cloth is, of course, more preferable. What would be your suggestion as to the mechanical set-up required in producing this finish? (7839)

We know of no prepared sizes which will produce the stiffness and body that you desire. It is not difficult to make a size that will duplicate the stiffness; but to prevent the change in shade is more troublesome, a large amount of starch and dextrin must be used. Addition of some blue color, such as Direct Black B.H., would be of assistance, but too much must not be added, otherwise the yellow tinge will turn to a greenish color.

We suggest a formula composed of the following: 20 lb. pearl starch, 22 lb. dextrin, 12 lb. glucose, and 7 lb. epsom salt.

Boil together 1 hr. and dilute to 50 gal. of finished size. Allow to cool to 120° F. Add 2 to 3 oz. Direct Black B.H., or some other navy blue color. Apply the size to the goods in a Tommy Dodd, or backfilling machine. Run directly onto the drying cans. When dry, press on a two-roll friction calender. No heat. Rolls, blades, spreaders, etc., on the backfilling machine must be true and in good condition to prevent the size from striking through to the face.

▼

Finishing Linen Thread

Technical Editor:

We are enclosing a sample of linen thread finished with some kind of a pitch or okum. If you can let us know what kind of a preparation this is, we should like to try it on some of our thread. We should also like to know if it is applied to the thread while going through the finishing machine, or if it is applied on a winding machine. Any information you can give us will be greatly appreciated. (7822)

The appearance of this sample of linen thread leads us to believe that it is used for wrapping golf clubs, tennis rackets, etc. It is to be understood, of course, that this thread is dyed and dried before the finish is applied. The finishing compound may be applied on a three-brush, thread-dressing machine. There are two or three different formulas which may be employed in making up the solution. One that has met with considerable favor is as follows: 45 parts bees-wax, 45 parts rosin, and 20 parts of No. 20 tar (retort). This is dissolved, combined, and put in the size box of the dressing machine. The solution is kept at a temperature of 140° to 150° F. by means of a blind coil in the size box. After the thread has been passed through the solution and squeezed with heavy size rolls, it is then wiped back into the size box by means of close-set guides or felts to remove the superfluous solution. It is then skied (6 to 8 ft. or even higher if possible) to allow the solution to set before coming in contact with the brushes. The thread is then brushed very lightly. In some cases it is passed through a high-speed friction machine (wooden rolls) to obtain a higher and smoother polish. This polish is usually added to the thread after it has passed over the three brushes just before the take-up. The brushes and crease rolls are speeded up to the maximum to obtain best results; otherwise the thread will have a tendency to finish flat rather than round.

After the thread has been finished on the dressing machine, it must be wound without delay and wrapped in waxed paper or cellophane and sealed. The wrapped thread is then placed in a carton which in turn is covered and sealed. The wrapping and sealing of this particular thread is important. There must not be any delay in the winding, as the rosin will oxidize if exposed to the air for any length of time, and the finish on the thread will become hard and brittle. The longer it is exposed to the air the less tackiness is obtained. If the tackiness is too great, the solution can be thinned by adding a suitable amount of benzine.

Inquiries should give the fullest information possible; and if damaged material is involved, a sample should be sent. We give no consideration to anonymous inquiries and do not undertake routine analysis of yarn or fabric, or investigation involving unusual expense.

▼

Believes Belting Should Be Bought on Power per Dollar

Technical Editor:

On page 39 of the March 12, 1932, issue of TEXTILE WORLD, under the heading "Leather Belting to Be Sold by Thickness Instead of Weight," we note the statement: "Having the endorsement of the entire industry," etc. This should have been changed to read: "The entire oak leather belting industry."

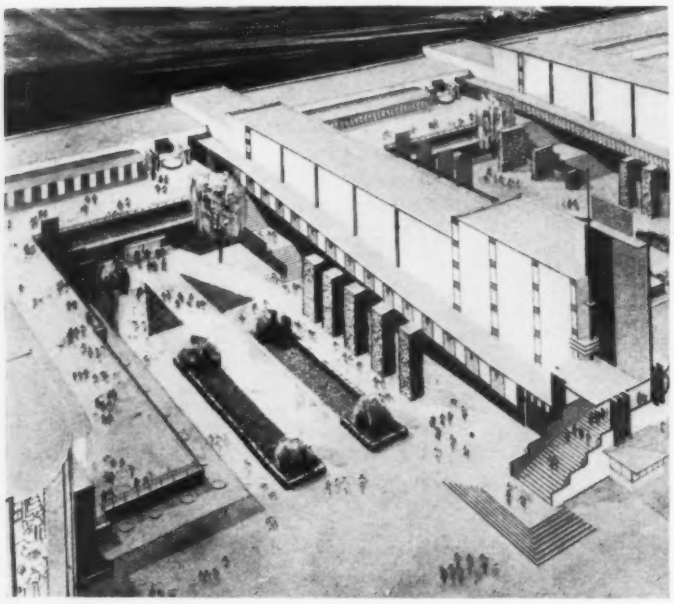
All of our leather is tanned by a mineral process, known as the "Vim" process, and is entirely different from the vegetable-tanned oak leather. For years back, we have fought all of the oak leather belting manufacturers, explaining the foolishness of the previous belt specifications—in fact, pointed out repeatedly that oak-tanned leather belting can be given almost any weight by filling it with weighty materials.

Now the change to thickness is suggested; and while we consider this a good move for manufacturers of oak belting, it does not apply to our "Vim" Leather Belting. In fact, we now contend that leather belting should not be sold either by weight or thickness. "Vim" Leather Belting is thinner than any other leather belting because of its special method of mineral tannage, which removes all inert matter, leaving only the fibers in their natural state.

The proper way to buy belting is to disregard weight per square foot and thickness, and buy belt that will transmit the most power per dollar of cost. Oak leather belting can be plumped to give it thickness, by chemicals and extracts, which do not, however, add to the quality of the belting.

LOUIS E. MURPHY,
President, E. F. Houghton & Co.,
Philadelphia.

Textile Display Plans Developing For Chicago World's Fair



Architect's sketch of General Exhibits Group, showing Textile Building at Chicago World's Fair

PLANS for the textile industry's exhibits at the Chicago World's Fair next year are developing rapidly, and indications are the industry will make a notable showing at the exposition, according to a statement prepared for TEXTILE WORLD by the Division of Publications, of the fair. Textile displays will be centered in the Textile Building, which will be one of the General Exhibits Group of industries at the fair; the displays will occupy approximately 30,000 square feet of space, and will demonstrate the story of the industry's development.

Among the features projected are mechanical equipment exhibits illustrating the progress made in all divisions of fabric production. Hosiery production will be demonstrated in detail. Other exhibits will illustrate modern methods of making mohair, and the evolution of wool from sheep to suit. The story of cotton goods, sheets and pillowcases and dress fabrics will be portrayed in displays, as will the newest processes of making rayon merchandise.

Dyeing processes also will have an important place in the Textile Building displays, under the present program. The statement adds:

"While it is not possible in 30,000 sq.ft. of space to tell the complete story of the textile industry, arrangements will be made so that the story of outstanding accomplishments in the industry can be interestingly depicted.

"The conservative estimate of 50,000,000 paid admissions to 'A Century of Progress Exposition' during the five months it will be open on Chicago's lake front, insures an audience for exhibitors that is unobtainable in any other way."

Rayon To Supplant Silk? . . . Debry's Talk Stirs Trade

THE outcome of the growing rivalry between silk and rayon was a leading topic of discussion in fabric and yarn markets this week, following the recent statement by Paul Debry, president of Duplan Silk Corp., in which he voiced the prophecy that eventually synthetic yarn would supplant silk. Mr. Debry's address, which was made at a luncheon given by his company at Pierre's, New York, excited widespread attention in the textile industry. Although others have commented along similar lines, none has put the issue so boldly.

Mr. Debry open with a review of the technical progress which the synthetic yarns have made during recent years. He pointed out that his own company has spent nearly 20 years in developing rayon fabrics. He predicted that silk will be gradually eliminated as a fashion leader by rayon, adding that the time might come when silk would be a follow-up fabric which would concentrate on imitating the artistic effects which would characterize the future rayon fabrics. The speaker especially stressed the significance of acetate yarns and told of notable fabrics made from these yarns by French fabric houses.

His statement is regarded in the market as particularly significant in view of the present price-race between silk and the synthetic yarns. An interesting feature of the market reaction was that, while silk houses were obviously stirred, the rayon companies took the prophecy phlegmatically.

Silk trade sentiment on the address was much less skeptical than heretofore. While grinning broadly at the idea of silk as a runner-up in the race, importers, throwsters and fabric manufacturers admitted that the claims for rayon's development as a parallel fabric could not be dismissed lightly. It also was conceded that the present instability of silk prices constituted a big point in rayon's favor. However, this is regarded by the silk industry as a purely temporary condition, and the general view is that silk will resume in its normal position when business conditions become normal.

▸ Complete N. Y. Outerwear Machinery Report

With a view to providing facts toward improving the equipment policy of the knitted outerwear industry, the Department of Commerce has just made public the results of a survey covering the City of New York. This study is the third in a series, the two previously published covering Philadelphia and Cleveland; all were conducted by the Department at the request of the National Knitted Outerwear Association.

In the analysis of the data secured for the machines the following is included: excess capacity, new and second hand equipment, age of machine, range of fees and sizes, types of garments produced, and a comparison of machines in Philadelphia, Cleveland and New York. In the development of cost information the report deals with overhead; interest on capital, vested and working; interest on value of inventory; allowances for wastage and losses; depreciation; scrapping of old equipment; and costs of operation.

▸ J. P. Holt Sees Trend to Quality

Industry is turning from a haphazard interest in low prices to a "generally growing realization of the true merchandising importance of maintained standards of quality and fair prices." J. P. Holt, general manager of the Aberfoyle Manufacturing Co., and chairman of the governing committee of the Durene Association of America, said at the Knitting Arts Exhibition in Philadelphia, recently. Mr. Holt remarked that manufacturers and merchants alike are expressing a new understanding of this basic principle of merchandising.

▸ Durene Fashions Shown in Television

Durene cotton fashions have in the last fortnight received widespread and unique publicity in television fashion shows directed by Mrs. Virginia Chandler Hall over the Columbia Broadcasting System. Mrs. Hall showed various lines, including a collection of Durene ribcord handbags by Stone & Gropper. Miss Peggy LeBoutillier, representing the "Just Right Sports Girl," was televised.

▸ Georgia School of Technology Receives New Machinery

The Textile School of the Georgia School of Technology, Atlanta, has received two new machines for use in the knitting department. The Hemphill

Co. through its Chattanooga (Tenn.) office, has installed one of its latest model Banner knitting machines, equipped with mechanism to control the plating of yarns of various materials and colors. The Southern Textile Machinery Co., Paducah, Ky., has installed one of its steady dial loopers, equipped with tension regulating devices, stop motions, and trimmer.

▸ Cotton Goods Statistics for First Quarter

An additional service to the cotton textile industry, in the form of quarterly statistical reports on production, shipments and sales of carded cotton cloths, was initiated through figures made public last week by the Association of Cotton Textile Merchants of New York. This compilation aims to satisfy the repeated demand for a broader analysis than can be secured in the monthly reports.

Production during the first quarter of 1932 was 762,301,000 yd. Shipments were 793,318,000 yd., or 104.1% of production. Sales were 749,442,000 yd., or 98.3% of production. Stocks on hand decreased from 290,248 yd. on Jan. 1 to 259,231,000 yd. on March 31, or 10.7%. Unfilled orders declined from 322,039,000 yd. on Jan. 1 to 278,163,000 yd. on March 31, or 13.6%.

March statistics confirm recent trade comment on the hand to mouth character of buying in that month. Shipments were 265,675,000 yd., equivalent to 93.1% of production for the five-weeks period. Sales were 165,850,000 yd., or 58.1% of production. Production was 285,252,000 yd., or at the rate of 57,050,000 yd. weekly.

▸ Greenville Will Observe National Cotton Week

Manufacturing and mercantile interests of Greenville, S. C., are combining their efforts in preparations for the observance of National Cotton Week, May 16-21, and arrangements have been completed for staging a cotton show in Textile Hall, the large exposition building in which the biennial Southern Textile Expositions have been held for several years. Announcement of the elaborate event was made last week, following a conference between Col. W. H. Keith, president of the Retail Merchants Bureau of the Greenville Chamber of Commerce, and George A. Sloan, of New York, president of The Cotton-Textile Institute.

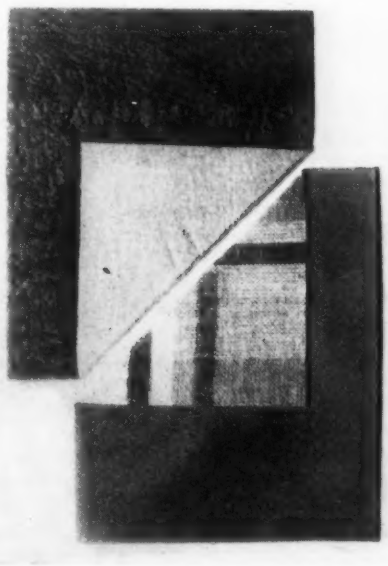
The first floor of Textile Hall, containing 10,000 sq.ft. of floor space, will be converted into booths in which cotton mills, bleacheries and printing plants, and retail merchants dealing in cotton products of all kinds, will display their wares. An outstanding feature of the event will be an exhibit of cotton frocks furnished by The Cotton-Textile Institute, under the direction of Miss Catherine E. Cleveland, of the Institute's staff. Another attraction will be a cotton ball to be held on the second floor of the building.

Doe-Tex Fabric, a Du Pont Product, Utilizes a New Technique

FOLLOWING the announcement of a new fabric, known as Doe-Tex, exhibiting a new and attractive suede effect, the Rubber Products Division, Fairfield, Conn., of the Du Pont Rayon Co. held a two-day exhibit of the new product on April 11 and 12 in their offices in the Empire State Building, New York. The following list of some of the products on exhibition will give an idea of the wide field in which this fabric is expected to play an important part: raincoats, sports jackets and vests, helmets, shoes, slippers, belts, pocketbooks, luggage, toilet kits, card table covers, pillows, hassocks, and bathing sandals.

In the construction of the material an interesting and novel fabrication is noted. A ground fabric, which may be a drill, twill, moleskin, duveteen, lawn, sheeting, satin, or plaid, is run through a special machine similar to a back-filling mangle in which a coating of rubber is applied to the face. The coated fabric then passes into a flocking machine, in which cotton flocks are spread or blown evenly on to the semi-plastic rubber surface. Because of the plasticity of the rubber, the flocks are held to the fabric. To further insure the anchoring of these short fibers in the rubber base, the fabric is passed through a set of rollers which are an integral part of this machine. The next process is that of vulcanizing, a heating process, in which the rubber is cured. If a smooth finish is desired, the fabric is then considered to be completed. In many cases, however, attractive effects have been secured by embossing the face of the fabric on a regular embossing calender. In addition to embossing it is stated that the fabric is particularly adapted to printing, gold stamping, perforating, embroidering, pleating, and quilting.

An interesting and practical feature lies in the fact that the fabric is capable of being washed with good results.



Two samples of Doe-Tex, showing various surface and backing effects, one-half size.

▸ Outerwear Year Book Stresses Cooperation Need

Outstanding problems of general importance to the knitted outerwear industry are analyzed by trade leaders in the 1932 Year Book of the National Knitted Outerwear Association, which has just been issued. Dan Rheinauer, president of the association, and president of New York Knitting Mills, Inc., contributes a foreword in which he urges closer cooperation among outerwear manufacturers through the association. "The era of free-lance and easy profits is past," he writes, and the new problem is "how a fair price may be maintained so that all who are dependent upon our economic structure may not be imperiled."

Harold R. Lhowe, recently appointed executive director and counsel of the association, contributes an article stressing the value of the trade association in times of emergency such as the present.

He makes a strong plea for development of trade unity of thought and stronger support for the trade association which is a "medium by which units of production or distribution may cooperate to better their business conditions and assure themselves more profitable operation." The year book comprises numerous other articles of importance.

John J. Phoenix, of Bradley Knitting Co., and a leader in the association's tariff's activities, emphasizes the need of tariff protection as vital to the life of the outerwear industry.

Other contributors are: H. L. Ashworth, business manager, Western District of the association, who urges a national distributors' group; John Sichel of Dearnley Brothers, who discusses cooperation between knitter and wholesaler; Emanuel A. Obstfeld, of Lhowe and Obstfeld, attorneys analyzing the proposed general sales tax; Sidney Korzenik, secretary of the association, who offers a swift-moving and interesting history of the growth of the knitted outerwear industry; Nathan Lewis, of Kahn & Feldman, thrown silk, on the place of silk in knitted outerwear apparel; Ernest L. Starr, director of the Durene Association of America, reviewing the place of Durene in outerwear; and John F. Stern, publisher of *Knitted Outerwear Age*, who writes that "the lack of cooperative spirit among knitted outerwear manufacturers" is to blame for the present dearth of profits in volume turnover.

▸ Chas. Pinnell Heads Color Card Association

Broad questions of policy and election of officers were the features of the seventeenth annual meeting of the Textile Color Card Association of the U. S., Inc., held on April 15 at the New York headquarters of the association. The following officers were elected: President, Charles Pinnell, Fred Butterfield & Co.; first vice-president, Roy E. Tiles, Gotham Silk Hosiery Co.; second vice-president, Armand Schwab, Amberg, Schwab & Co.; Treasurer, Alfred L. Simon, Alfred L. Simon & Co.

The following were also elected as members of the board of directors: Albert L. Gifford, Worumbo Co.; William Hand, John Hand & Sons; Edward S. Johnson, James G. Johnson & Co.; and J. Laird Schober, Laird Schober & Co. Margaret Hayden Rorke was re-elected secretary and managing director. Mr. Pinnell, in his address, paid high tribute to the two past-presidents of the association, Frederick Bode and Edward S. Johnson.

Margaret Hayden Rorke, secretary and managing director of the association, read her annual report, in which she reviewed the main activities of the association during the year.

Among the association's new members gained during the year, are a large number of foreign firms, indicating the increasing interest abroad in the association and the American cards. The association has new American affiliates in the chemical industries and among the dyers, including fur dyers, also glove manufacturers and several divisions of men's furnishings. The association during the year has manufactured 51,607 cards, including silk, wool, shoe and leather seasonal, hosiery standard and seasonal, supplementary mid-season cards and special cards showing the basic colors for retail buying, as promoted by the National Retail Dry Goods Association. There has also been organized a committee in cooperation with the New England Manufacturing Jewelers' and Silversmiths' Association for the seasonal selection of costume jewelry.

▸ 20,000 Stores to Mark National Cotton Week

With expressions of whole-hearted cooperation in the observance of National Cotton Week daily reaching the Cotton-Textile Institute from widely separated sources, it is already assured that more than 20,000 stores will be active participants in this nation-wide promotion scheduled for the week of May 16-21. The cotton industry and retailers generally in all sections of the country are looking forward with confidence to the attainment of the two-fold objective of this event: first, increased sales volume in cotton goods and, second, the acceleration of retail business generally.

The Independent Grocers' Alliance of Chicago, Ill., made up of more than 10,000 retail units and 107 jobbing organizations located in 41 States, will take an active part in National Cotton Week with a coordinated promotion on cotton packaged groceries now planned. Ten other chains, operating more than 4,000 dry goods and notion stores in all parts of the country, are cooperating in a similar way. Julien L. Eysmans, vice-president of the Pennsylvania Railroad, stated that the event would be highlighted on special cotton menus on all dining-cars of that road.

Textile Directory To Be Without Advertising

Commencing with the next edition, the *Official American Textile Directory* will be published without advertising. This is in conformance with the policy which the publisher, the McGraw-Hill Catalog and Directory Co., has found so popular in other fields—that of publishing directories without advertising when they are designed primarily to aid the seller. The new edition, which will be ready early in 1933 completely revised up to the date of publication, will be bound so as to permit convenient use during travel.

The *Textile Catalogs*, designed primarily to aid the mill buyer, hereafter will be compiled and distributed to mill men every year, instead of every other year.

▸ M.I.T. Plans Two-Day New Products, Research Exhibit

New products of New England plants and research laboratories of Massachusetts Institute of Technology will be exhibited to business men and manufacturers, May 3-4, when the New England Council, through its industrial committee, will conduct Research Day and New Products Day for New England Industries, it is announced by James W. Hook, chairman of the industrial committee and president of the Geometric Tool Co., New Haven, Conn.

The Council Industrial Committee, with the cooperation of the Institute of Technology and other organizations, has arranged a two-day conference. On Research Day, Tuesday, May 3, New England industrialists, as guests of the New England Council and the institute will make a tour of the 17 laboratories of the institute.

President Karl T. Compton of M.I.T., who will welcome the business men in the auditorium of the new George Eastman Research Laboratories, Cambridge, on the morning of May 3, said the tour aimed to show the various ways in which the institute is now cooperating with industries for the solution of their technical problems, and also to secure from discussion suggestions regarding ways in which this service can be extended and improved.

An open forum for discussion of the development, testing, and marketing of new products will be the feature of New Products Day, on Wednesday, May 4.

▸ Textile Research Leaders To Honor F. P. Garvan

Recent progress toward development of a well-rounded program of scientific and economic research for the textile industry will be analyzed by trade leaders at the luncheon-reception to be tendered to Francis P. Garvan, at the Hotel Biltmore, New York, on May 4. Mr. Garvan has been elected to succeed the late Dr. Samuel W. Stratton as the president of United States Institute for Textile Research, Inc., and the luncheon will signalize his entry into that office.

The Textile Foundation, which was created by act of Congress to administer a fund of $1,300,000 for the promotion of scientific and economic textile research, and which has just made public some 20 awards for research fellowships and scholarships, will be represented at the luncheon by Chairman Franklin W. Hobbs, and by several other directors.

A program of significant addresses has been arranged. President Karl T. Compton, of Massachusetts Institute of Technology, will review the part that universities and technical institutions are playing in correlating educational and industrial effort in scientific research. Others who will speak are Dr. Charles H. Herty, former president, American Chemical Society; Maurice Holland, director of the Division of Engineering and Industrial Research of the National Research Council, and W. D. Appel, chief of the Textile Section of the U. S. Bureau of Standards. There will also be reports on the status of U. S. Institute's new book on "Textile and Allied Research: A Review of Progress," and on the status of its cooperative study of fabric wear-testing and abrasion machines.

▸ March Finishing Drops

The National Association of Finishers of Textile Fabrics has issued its regular monthly statement of percentage of normal average capacity operated in its industry during March with usual comparisons, as follows:

	1932 (4 weeks)	March	1931 (4 weeks)
White and dyed combined	58	61	46%-white 54%-dyed
Fast black	17	19	
Logwood and / or sulphur black	26	35	
Prints	85	80	
	1932 (4 weeks)	February	1931 (4 weeks)
White and dyed combined	59	58	46%-white 54%-dyed
Fast black	18	19	
Logwood and / or sulphur black	30	30	
Prints	86	75	

▸ Low Mark in Fertilizer Sales in Cotton States

Sales of fertilizer in six cotton-growing States during the four months from December to March inclusive were the smallest in that period in more than a decade, according to the New York Cotton Exchange Service.

TEXTILE WORLD ANALYST

Do Large Orders Really Justify a Lower Price?

The point has been brought up that, considering all the factors in the case, it is often uneconomic to accept large orders at prices below those usually quoted, and that in some cases the large order should call for a higher price than the small order.

TWO mill men recently made markedly divergent comments. One said:

"Things are looking a little better with us. We received a very large order recently for one number in our line. Naturally, it was such a large order that we had to take it at a very low price—below cost, in fact—but it certainly will carry the overhead."

The other mill man said:

"One of our customers wanted to place a large order with us. Wanted, in fact, to take far more of our product in this line than we had figured to make. So we went to the customer and told him that if we were to take the risk of tieing up so much of our production with one customer—particularly on a style number—we would have to get a price premium. Consequently, we quoted the customer a higher price than usual for the large order."

On the surface, the latter mill man was idiotic. The fact of the matter is, however, that he is a far more successful operator than the first, and that he actually got the order at the premium mentioned. Both men are in the same general line of business. The different viewpoints are worth analysis. To simplify matters all textile mills will arbitrarily be considered as divided into two groups — those producing staple goods, and those producing style goods.

According to the first man, the mill that runs the same type of fabric all year figures a very large order as a back-log, with the aid of which—and perhaps a few others like it—the mill will be enabled to run full time, or at least fuller than competitors. The theory is that if, say 80% of the mill can be run on goods that show a profit above theoretical costs, the mill is well off if it can get enough business—even below cost—to run the remaining 20% of capacity and thus reduce the overhead burden on the 80%. The theory has also been expounded about industry in general that it is the last 10% of the business that makes the difference between a profit and a loss.

In following up his line of reasoning the first mill man points out that the staple mill is hooked up for mass production, and that mass production requires large orders. In the style mill, constant changing over raises costs and the mill which gets a large order for one number is in an excellent position because it can produce this number on mass production scale. According to this man, the economies made in putting through a large order are so obvious that any discussion on the subject is ridiculous.

The second mill man, however, believes that the subject is decidedly worth discussion. He states:

"There are two ways to look at this problem of large orders. The first is the manufacturing end and the other the sales end. On the manufacturing end it is argued that the larger the order the lower the cost, according to the well-accepted principles. There is, however, a flaw in this reasoning as applied to the textile industry. You may be able to turn out 100,000 automobiles a year at a much cheaper unit price than 10,000 a year, but is there a corresponding difference in cost between the 50,000 spindle mill and the 500,000? I think not. Textile mills have practically all applied the so-called mass-production principle for years, even though the unit be comparatively small.

"As far as large orders are concerned, can the mill producing a staple line turn out one order for 500,000 yd. of material any cheaper than it can turn out 50 orders for 10,000 yd. each for the same material? Not at all. The only point is that you know when you *have* the one 500,000 yd. order and you may not be so certain about getting the 50 orders. This, however, is a sales point, and will be taken up later.

"Now consider the large order in connection with a style goods mill. It is argued that the large order means a long run and reduces the expense of change-overs. Granted; but is it ever considered that after you go beyond a certain minimum unit of production the cost of changing-over becomes negligible? To illustrate very roughly, it may be very costly to run single pieces of cloth, but doesn't the cloth from a full beam represent an economic unit of manufacture as far as the loom is concerned? I bring this point up merely because it is a factor that is usually entirely disregarded and most mills believe that costs go down at a constant rate in accordance with the size of the order.

"The sales angle, however, is decidedly more interesting. The first man who thought of getting as much business as possible, say 80%, at a profitable figure, and then selling the remaining 20% at cost, undoubtedly had a brilliant idea. It worked until his competitors decided to do the same thing, and it wasn't long before there was a decided competition for the 20%. So the original genius decided that he could afford to sell the 20% a little below cost and still be well off. That worked until competitors tried the same thing. About this time the 80% of the customers who had been paying fair prices met with competition from the 20% who had the advantage of the low prices and then the battle really started. It was not long before the entire production was sold at the original price for the 20%. What is more, unless the whole industry operated at capacity, the average mill only ran 80% anyway at a price that had been figured to catch the extra 20%.

"This theory that it is the extra 10% that makes the difference between a profit and a loss, may be sound in some ways, but it certainly is not to be followed blindly. At present, conditions are such that often if you want to sell the extra 10% it costs you so much in sales expense, or in lowering of your prices, that it isn't worth it.

"One of the most interesting features is the effect of large orders on con-

(continued on page 44)

The merchandising discussion which appears regularly on this page considers various branches of the textile industry from week to week. It analyzes significant marketing trends or developments in those branches. While it covers current movements, its conclusions concern potential future significance of those movements rather than the effect of temporary fluctuations in trade sentiment.

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

◆Cotton Yarns Dull at Weak Prices

THERE is still no break in the dull monotony which has dominated the cotton yarn market for the last few weeks. Demand is almost entirely lacking; even the interest in small lots for spot delivery has dropped off almost to the vanishing point. Needless to say, prices have shown further weakness, both with dealers and spinners. There is, however, hardly sufficient business being done to indicate any established values.

With the cotton market continuing to show signs of weakness, naturally there has been little chance to maintain anything like a firm position. With prevailing yarn prices apparently based on cotton at 5c. or less, spinners are said to have reported paying 6½c. for cotton delivered at the mill in the South. Prices thus bear little relation to costs. A spinner who visited the northern markets recently stated that he had considered curtailment among spinners well established and upon a basis to meet the situation. However, after he had studied conditions in the North among consuming mills, he found that their curtailment there was even more extensive, so that yarn production is still in excess of present demands. In his opinion it will be necessary for spinners to curtail still more if they are to meet the situation completely.

Yarn dealers are confident that conditions like these cannot continue for any great length of time. They argue that the low cost of cotton and its products is bound to result in a good volume of business, and with the stage all set for active operations, are looking for warmer weather to produce results, with prospects for a good cotton goods year. With 20s-2 warps quoted at 14½ to 15c., it is stated sales are made at 14 to 14½c.; 30s-2 warps are 18 to 18½c.; single 12s warps at 12½ to 12¾c. weaving mills in and around Philadelphia are reported quiet and looking for business.

Carded knitting yarns are dull. Dealers say they usually can count upon some business from New York State manufacturers, but at present the only interest there is in small scattered purchases. Specifications have been rather hard to get especially on underwear yarn contracts, but here and there some mills are reported taking deliveries on yarns for underwear and cheap lines of hosiery. For 10s framespun 12 to 12½c. is usually quoted, but hints are given that a good-size offer might find even 12c. shaded; 30s tying-in yarns are 17½ to 18c., with better grades at 19 to 20c.

Combed yarns do not show any advantage over carded in either demand or price. Sales are noted of 30s as low at 24c. and 38s at 27 to 28c. but these are regarded as below the average value. Mercerized yarns are very quiet. Specifications also are rather slow as a result of retailers operating conservatively because of unseasonably cool weather. A warm spring is expected to bring about a revival of demand for goods and naturally for yarns.

◆No Trend to Cotton's Fluctuations

LITTLE change in the general ruling of the cotton market occurred during the week. The spot demand in the South has remained quiet, but little or no cotton is offering from the interior and the basis has remained steady. Fluctuations in futures have been rather nervous and irregular with no definite trend developing, and with traders evidently more interested in the evening up of May commitments, than in undertaking fresh commitments in view of existing uncertainties. The firmer technical position developed on the decline during the first week in April was reflected by some covering which carried the price of July contracts approximately up to the 6½c. level toward the end of last week, but reactions followed, owing to the failure of demand to broaden after the covering subsided. Since then the market has held within a comparatively moderate range with May liquidation continuing. Much of this has been in the way of transferring from May to later deliveries at the prevailing premiums, while the balance has been absorbed by the trade, presumably against sales of the later months.

As suggested by the ruling of the market, traders have found nothing of a positive character in the week's news of sufficient importance to warrant an aggressive position on the market. It is

(Continued on page 45)

Market Briefs

Cotton: Sagging market does not maintain its rallies.
Cotton Yarns: Buyers withhold except for scattered small-lot trade.
Cotton Goods: Second hand under cut market, but trade light.
Wool: Scant business insufficient to try out market.
Worsted Yarns: Users neglect market and trade remains dull.
Woolen Goods: Price outlook clears; active fall sampling.
Silk: Firmer tone follows price decline.
Silk Yarns: Spun silk active; thrown yarns quiet.
Silk Goods: Steady call for printed sheers; prices firm.
Rayon: Good April volume expected.
Knit Goods: Trade skeptical of mesh hosiery; women's plain full-fashioned active. Credit problem cuts underwear sales. Summer approach fails to stimulate swimsuits.

◆Worsted Yarns Still Await Demand

FALL lines of heavy-weight men's wear and dress goods are being shown, but little result has been noted in the form of orders for worsted yarns. The yarn market continues quiet, with little to relieve the monotony which has dominated it for the last few weeks. Spinners believe business is bound to develop in the near future, but the old bugaboo of unsettled prices is still acting as a deterring factor.

Dress goods are particularly quiet but many manufacturers are still hoping to be able to ship goods which were held up because of the cold and early Easter season. This situation is important since credits occupy such a prominent place in the attention of sellers. As soon as some of these lines can be moved and liquidated, users of fabrics will be in stronger financial position to operate. Another matter in which yarn men are directly interested is the necessity of action to discourage or discontinue entirely the unlimited practice of cancellations of orders for goods. Some argued that this trade abuse has played an important part in producing the unstable conditions which the industry is facing. Until an order is established on a firm basis, it is clearly impossible to operate with any high degree of confidence.

There has been too little business done in weaving yarns to establish prices on any definite basis. Reports of concessions are heard, but there seems to have been little reason for pursuing such a policy. Therefore, prevailing quotations from average spinners for standard quality yarns remain about the same. The wool market continues to show signs of strength which offers little encouragement to sell yarns short.

Knitting yarns have developed little activity. Swimsuit yarns are moving in a limited volume, with signs of improvement reported. The better grades continue to lead in interest, while the cheaper lines are still slow in developing any volume business. There is every evidence of a late season which, as the summer months approach, will mean a crowded condition, in which adequate deliveries of both yarns and goods to meet demand will be a difficult problem.

With buyers endeavoring to secure price concessions, the situation appears generally unchanged. Leading spinners have been making a serious effort to stabilize prices, but occasionally weak spots appear under special conditions which do not represent the average. Therefore, 2-20s high quarter-blood yarns are being held around 67½ to 70c.; single 18s slub-dyed Bradford average 87½ to 90c. Lower prices reported are attributed to grades below accepted

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

standards. Some knitters are said to be trying to use Bradford "zephyr" yarns in an effort to obtain a lower cost in French spun, but it is a question how successful such a practice will prove. Routine call for immediate deliveries continues in small quantities and reduced volume.

◆Wool Price Basis Continues Uncertain

THE wool market is inactive, which has been the case for the month to date. Mills are taking small quantities of wool at fairly firm prices for piecing-out purposes, but beyond this there is little evidence to show that manufacturers are interested in wool. Dealers are convinced that any cutting of prices at this time would be fruitless and that the whole situation, involving to a large degree the attitude of the goods market, is likely to remain unsettled until some basis for wool can be agreed upon. As the wool trade sees it, manufacturers in their acquiescence to the bearish attitude of the goods market are selling their birthright for a mess of pottage.

Buying of territory wools by manufacturers during the week has been on a retail basis. Prices paid have had no significance as to trend and have been on the lower edge of asking prices. Business in fleece wools has been negligible. The finer wools, now that they have been brought down to a competitive basis with other fine staples, are attracting more attention. A few small sales have been closed on fine wools of the Ohio type at 20 to 21c. in the grease or 50 to 52c. clean basis. Interest in Texas and California spot wools continues at a low ebb.

Wool growers in the early-shearing sections of the West are refusing to crowd the new clip on an unwilling market. Growers have their backs to the wall and are refusing to be stampeded. In sections of California bankers have come to the aid of the growers and advised against accepting the low bids. Stocks of old wool are still sufficient for current mill demand and the National Cooperative takes the position that no good could result from crowding the new clip on the market at a time when it seems improbable that mills would buy for future needs even at bargain-counter prices.

The wool top market, though quoted nominally, is actually lower than it was a week ago. The standard exchange 64s fine top lost another 1c. per pound to 67c., which is the low point of the year. Top-makers, not knowing at what prices they can buy wools of the new clip, are equally in the dark as to what prices mills will be ready to pay on tops when business in worsteds is placed by the goods market.

◆Cheap Wool Halts Substitute Demand

DEMAND for wool substitutes continues sluggish but the general price basis is just as firm as that on wool. Recovered wool manufacturers entertain little expectation of much lower prices on rags or reworks and take the position that the attractive competitive basis of these materials will in the long run bring about larger mill interest leading to a good consumption of these substitutes for wool.

Dealers in wool wastes are expecting more action as spring advances although at this time the situation is dull and prices, though fairly stable are not proof against lower mill bids. Cheap as are many grades of wool there are still cheaper wastes and shoddies. Woolen card wastes, are being offered as useful material for blends in connection with various overcoating lines. Card wastes of this description can be bought around 6c. and very exceptional material for 9 or 10c.

Noil dealers have been favored by a good average mill demand during the greater part of the year and although business is slow at the moment the several types of dress goods which allow the use of noils in their construction have been going well and are likely to develop further activity in the near future, it is said. Fine and half-blood noils are still quoted near the high level of the year, in sharp contrast to wools and wool tops which are on the year's low level. A choice fine domestic noil will bring about as much as a second-rate fine Australian noil, the latter noil having sold around 42c. recently with the choice domestic fine at 40c.

◆Rayon Demand Stresses 100 Denier

RAYON approaches the end of April in a satisfactory position. Yarn sales for the month probably will be slightly below March, which is regarded as the normal situation. Up to the end of last week, leading producers found volume for the current month to parallel March, but they looked for a slackening during the second half. Southern weavers are active customers, especially for 100 denier, and indications point to steady movement there for at least another week or so. The knit goods mills have slowed up on commitments, but a fair quantity of business is still being placed.

Producers who restored the price guarantee—and this includes most firms with the exception of the Viscose Co. —reported increased confidence among their customers as result of that action. However, the Viscose Co. also is enjoying a healthy movement, and trade prophets now believe that that firm will hold to its non-guarantee policy. The market sentiment is very healthy, and consuming industries are pretty well sold on rayon's price stability. Yarn stocks in producers' hands average four to six weeks' supply which is about normal; production is generally about 65%.

◆Increased Demand For Spun Silk

SOMEWHAT better feeling was noted in the spun silk market this week, thanks to increased interest in most of the consuming groups. A fair quantity of orders was placed by both underwear knitters and broadsilk weavers, and wool goods manufacturers were making inquiries, preparatory to buying early next month.

The thrown yarn situation continues very uncertain. Hosiery mills which had been active at the beginning of the month this week notified the throwsters to postpone deliveries, due to backward movement of hosiery. Prices of yarn registered a sharp drop reflecting primary market declines, but this had no reaction on demand.

◆10-Bale Order Now Silk Average

RAW silk prices again declined over the last week-end, but stronger cables from Japan brought a slight firming Tuesday. Demand from consuming industries is so light that there seems little prospect of any definite steadying. Broadsilk mills limit their activity in many cases to 10-bale orders for spot shipment. These manufacturers report slightly better movement of fabrics; however, broadsilk prices are competitive to the point of almost eliminating profit, especially in flat crepes, and the condition does not encourage manufacturers to cover ahead on raw silk needs. Hosiery mills are in a somewhat better position.

Importers continue to get complaints from hosiery mills about mixed stocks, and they attribute the condition to the weak prices in Japan. The Japanese market is on so unprofitable a basis, that exporters and reelers do not know how long they will be in business, and therefore are very indifferent regarding the quality of what they sell, it is contended. The Tokio situation became more unsettled this week due to the failure of an important Japanese brokerage house.

FABRIC MARKET REPORTS

TEXTILE WORLD ANALYST

◆Scant Trade Spreads Cotton Curtailment

DEMAND for cotton goods remains at a low ebb and, with the gray goods market completing the ninth week of inactivity, further curtailment in production of print cloth, sheetings and fine goods was expected. Merchants in the Worth Street district, in speaking of the urgent necessity for avoiding excessive production at this time, declared that they have never known the market to be quieter in March and April than it has been this year.

Interest in the sales possibilities during National Cotton Week has been responsible for moving small quantities of goods for immediate shipment. It was felt that this nation-wide promotion should reduce retail stocks during the week of May 16 to 21 and serve as a stimulant for replenishing those stocks. One bright spot in the market has been the attitude of print cloth manufacturers to hold firm in their prices in the face of concessions made by second hands.

The situation with respect to print cloth sales for the last three weeks has been almost unique in Worth Street annals. Practically all the volume in print cloths has been on goods sold by second hands at prices ranging from $\frac{1}{16}$ to $\frac{1}{4}$c. under what mills were willing to accept. For instance, 64x60 5.35 print cloths were sold by second hands at 3$\frac{1}{2}$c. to 3$\frac{15}{16}$c., whereas first hands asked 3$\frac{5}{8}$c. to 3$\frac{7}{8}$c. Likewise a difference of $\frac{1}{8}$ to $\frac{1}{4}$c. in prices quoted by first hands and second hands was noted on 68x72 4.75 constructions.

There was a slight weakening in sheeting and drill prices. The sheeting situation was regarded with alarm and the need for drastic curtailment in production is being urged by commission houses and certain important sheeting manufacturers. It was expected that a curtailment program, similar to that in print cloths, would be followed. Something like 90% of the print cloth group recently expressed intention of closing their plants one week each month during April, May, June and July. This emergency curtailment is in addition to that called for in the three-point plan adopted early in the winter.

In New Bedford, where mills have been operating at only slightly more than one-fourth of capacity, there is talk of a complete shut-down for six weeks. The fine goods division continues in a deplorable state.

Carded broadcloths experienced a flurry of buying at the end of last week, but interest subsided early this week. Sales of 37-in. 100x60s were made in sizeable quantities at 4$\frac{7}{8}$c. The lower counts were firm, 36$\frac{1}{2}$ in. 80x60s selling for 4c. spot deliveries.

Do Large Orders Justify a Lower Price?

(Continued from page 41)

tinuity of operation. Every one recalls concerns that have their so-called 'bread and butter' accounts. These accounts have given the mill very large orders taking up a large percentage of capacity, and mills with such accounts have often been envied. However, just look things over and check the number of mills that have lost their 'bread and butter' accounts, for one reason or another—mainly because the customer has gone on a different line. Was it worth while to have such accounts when their loss meant that the mill was left without adequate outlets for its product?

"Turning again to the style mill, a large order may mean certain economies of operation. But—the mill is taking a tremendous chance that the customer may not be able to continue selling the style as anticipated, or that the style will go out of fashion. When such a customer or style goes flat, the mill goes flat. What is there to repay the mill for the idle time until other customers can be gathered? Nothing but the profits made on the large order. And if the large order has been sold at a very low price because it is a large order, where is the profit?

"In summing up, I believe that the textile industry has followed too blindly the idea that the large order automatically means lower costs. Taking all the points together that I have mentioned, I think that careful analysis will show many cases where large orders do not mean as great savings in manufacturing as many think and that the risk involved is often so great as to entirely overthrow these possible manufacturing savings. Many large orders should not be taken at lower than usual prices, and there are cases where the risk taken calls for a premium."

The attitude of certain large consumers throws an interesting sidelight on the problem. It has been said that no one makes any money selling ——— (a large industrial concern), since this concern will tie up a concern's production for some time and then, after the concern has lost most all other customers, will go to that concern and say, "you are licked if you don't play with us, so either sell us at a very low price or sell your business out to us at our price." As another side of the picture, there are large textile consumers who refuse to tie up too much with any individual mill, regardless of the price inducement. These consumers reason that taking a large percentage of a mill's product may lead to difficulties in case of fire, etc., but, perhaps of greater import, they also reason that there may be difficulties because of the suppliers selling at such low prices as to go broke!

◆Wool Goods Price Status Improves

THERE was considerable clearing of the air in the wool goods industry this week, and fall fabric prices appeared to have reached a temporary stability. Quotations are about 10% below last year, and while the market looks for another three weeks of maneuvering, no drastic changes are expected in that time. Such would be a happy climax to the uncertainty which so discouraged buyers at the beginning of the month; levels then were so temporary that some of the largest companies revised their prices downward a bare two weeks after announcing first quotations.

Cutters-up are much interested in fall suitings, and there is active sampling. Interest centers on semi-staples, but several Fourth Avenue houses reported good advance response to certain modest fancies; these firms contradict the prevailing thought that novelties are hopelessly "out" and they claim that color effects, when conservative and neat, can win orders.

The warmer weather in mid-month spurred the spot call for fill-ins and mills look for the spring season to carry on into summer without any definite break.

◆Summer Silks In Active Call

BROADSILK mills find interest gradually increasing among both retailers and cutters, as regards summer fabrics. Chiffons and georgettes in gay warm weather designs are active, and the outlook for this range is encouraging, provided weather becomes favorable; the cold days of the last week have discouraged movement in stores and the industry works so close to the retailer that the reaction was felt almost at once by both the cutter and the weaver. There is strong call for new novelty prints and prices there are very firm; even on the prints which have been out all season, prices are steady. There is no great quantity of summer prints available and some sale executives talk of a shortage next month. In the volume range, print sales center on the $1.15 to $1.25 lines, while the quality fabrics move best between $1.50 and $1.95.

Plain flat crepes in white, blue and yellow showed improvement, but prices were weak and there has been little profit; numerous mills appear to be liquidating these goods. There is increased call for the chalk crepes and this may prove one of the important fabrics of the next six weeks.

KNIT GOODS MARKETS

TEXTILE WORLD ANALYST

◆Oversold Swimsuit Market Coming?

JOBBERS and retailers were still holding off this week on their swimsuit orders and many important firms have not yet placed their initial business. Opinion in Worth Street was almost unanimous in forecasting a congested market in May and June. The buying is the most backward veterans can remember, and manufacturers have reduced their production to conform, the result being that capacity production during the next eight weeks would not be anything like sufficient to meet a normal demand.

It was commented that orders would be well in excess of stocks even if an average summer developed, and if the summer heat equalled last year, the situation would be just that much more acute. Jobbers view the outlook with equanimity, taking the attitude that it is the retailer's "bad luck" if he will not be able to get stocks when the summer bathing season opens.

Current buying, in swimsuits and sweaters, is nothing more than in dribbles. There is no distress merchandise evident in any branch and prices are so steady, considering lack of orders, that a firm stock situation may be taken for granted. Occasional spot call for men's and women's lightweight sweaters is noted, but the interest in women's mesh effect knitted outerwear seems to have waned somewhat, due to backward weather. Heavyweight fall sweaters are scarcely moving at all and it is unlikely that there will be anything doing at that end prior to late July or August. Production of winterweights is being carefully watched and prices are steady.

◆Mills Doubtful About Mesh Half-Hose

DESPITE reports of good call for mesh half-hose, most manufacturers of men's lines are still very doubtful about prospects at that end, and it seems clear that there will be no early rush to add mesh to the men's lines generally. Several important factors remarked that there might be a good chance for mesh half-hose if business conditions were normal, permitting men to buy freely and frequently. At present, however, men are interested chiefly in the wearing quality of their sox and prefer conservative styles.

There is a fairly good demand for low-priced rayon half-hose, interest centering on small neat patterns in clocks and all-overs. Recent half-hose orders from jobbers show a leaning toward pastels, mostly in lines retailing at 25c. and 35c. The 50c. half-hose is in lighter call. Prices of men's lines did not show much steadying this week; there is considerable distress stock available and mills are eager to obtain cash.

Plain F.F. Fairly Active

Continued cool weather has weakened the call for mesh full-fashioned hosiery for women, but manufacturers are confident that these lines will pick up, once they get a spell of balmy days. Women's plain full-fashioned have been fairly active. Manufacturers of mesh do not talk so definitely regarding fall prospects, as they did.

There is a growing uncertainty about mesh for fall, though the immediate outlook seems good. Price trend is decidedly downward; current mesh hosiery is selling to retail at from $1.00 to $1.65 which contrasts with the condition of two months ago when the bulk of the volume fell in the $1.35 to $1.95 class.

It is necessary that hosiery manufacturers keep a stiff upper lip on mesh prices, and the next four weeks is viewed as critical in that respect. There is no general break now and no immediate sign of a break coming, but mills are making occasional concessions.

◆Underwear Mills Tighter on Credits

UNDERWEAR manufacturers find the credit status of retailers so doubtful that they are declining orders in increasing number. Many jobbers face the problem of shipping duplicate spring and summer orders to customers who have substantial bills outstanding and the decision frequently is to refuse the second contract until the first bill is paid.

Mill agents and jobbers are uncertain on the credit outlook, some feeling that it has passed its peak, but all agree that the issue is a serious one. Fall underwear lines are selling unevenly; a few large companies have substantial business, but most complain of complete indifference among buyers.

Lightweight Lines in Fair Demand

Production of heavyweights has been slowed down, not quite to the sales point, but low enough to offer promise for the price situation later. Lightweight underwear lines are in fair demand, especially men's athletic shirts and shorts, though all orders are small and for spot delivery. Cotton fluctuations have upset mill calculations and some have withdrawn certain of their lines, planning to offer new goods at higher levels, paralleling a recent rise in the raw market. Balbriggans are steady, but buying is light.

◆Raw Cotton Report

(Continued from page 42)

still too early for daily weather and crop advices to have much effect on sentiment, while reports from the trade have been rather more discouraging than otherwise with the failure of the usual spring improvement in business to materialize in any marked measure, a disappointment to buyers of late last winter. Nevertheless, the distribution of cotton is still running ahead of last year's as reflected both by exports and by world's spinners' takings, and some traders are still calculating on a world's consumption of around 13,000,000 bales for the season. Even the most optimistic view of the statistical position, however, merely tends to emphasize the necessity for a small crop.

Nothing more conclusive has been learned with reference to the probable acreage. Perhaps the average forecast idea in the local trade is that there will be a falling off of about 10% in the area, but some figures are heard ranging up to 15 or 16% and the Fossick Bureau of Memphis in its last weekly report said there was nothing to indicate a definite change from earlier indications pointing to a reduction of 12½ to 16 2/3% for the belt as a whole.

The crop is not getting too favorable a start in the Southwest owing to dry surface soil, and low temperatures have delayed germination in some sections, but the chief factors in the bullish view of the coming crop outlook are the reduction in the use of commercial fertilizer expected to be in the neighborhood of 50%, the probability of insect damage next summer, and the fact that records of past years show that invariably such a large yield per acre as that of last season is followed by some falling off during the succeeding year.

◆Peeler Comber In Small Supply

SOME of the better grades of cotton waste are said to be quite scarce, particularly peeler comber. This lack of any large spot supplies at present is making dealers cautious in seeking new business. Mills using peeler comber in their product are running relatively better than those mills producing it.

Quotations on peeler comber were unchanged this week with 92% of spot remaining the percentage basis. It was reported in the trade that as high as 100% was paid in one or two cases for particularly choice grades, but these reports lack confirmation. Choice peeler strips have sold around 5¼c. and good card strips at 4½ to 4¾c., f.o.b. northern points, for sales to southern consumers.

TEXTILE FINANCIAL NEWS

TEXTILE WORLD ANALYST

◆Hamilton May Buy Own Stock

THE Hamilton Woolen Co. is holding a meeting this week to act on a proposition to buy from stockholders 6,500 shares at $65 and thus use up the sum of $422,500 now held in the treasury and which the company believes should be used in this manner. A circular to stockholders reads:

"The Hamilton Woolen Company, Inc., has on hand cash in excess of the estimated present requirements for working capital under existing conditions, and is unable under these conditions to use this cash advantageously. The board of directors, after carefully considering the problem of investing in miscellaneous securities, has decided that it would be advisable to use this cash to purchase stock of the corporation, and for the present to hold the stock in the treasury. At the present time the directors do not wish the corporation to go into the market to buy this stock without first offering all stockholders an equal opportunity to dispose of part or all of their holdings, should they desire.

"It is estimated that the financial position of the corporation as of March 31 was not substantially different from that as of Nov. 30, 1931, subject to changes incident to the ordinary operations of the company, and that the results of its operations for the four months' period ended March 31 are fairly comparable with those for the corresponding period in the last fiscal year."

Loss Indicated for American

A loss of $2,156,097 in 1931 for American Printing Co., Fall River, Mass., is indicated by a comparison of balance sheets, which show surplus account declined from $10,384,804 to $8,228,709 during the year. In 1930, when the surplus decreased $1,489,099, it was officially reported that the loss was "just under $1,500,000." Current assets of the company at the end of the year totaled $7,781,451 against current liabilities of $3,307,980, leaving net working capital of $4,473,471, as compared with $6.368,998 at the close of 1930.

Receivers of Boston Mfg. Report

The fifth report of receivers of the Boston Mfg. Co., 1901, Waltham, Mass., has been allowed by the Superior Court at Boston, Mass. Receivers stated to the court that $654,555 remains due to creditors, that the largest creditor is Amory, Browne & Co., former selling agents, that the total claims of the other 29 creditors amount to but $6,000, and that 44⅝% of claims had been paid creditors; that the receivers have $49,747 on hand, and that the receivers expected to fall short of paying creditors in full by $200,000, so that the claims of stock holders would be negligible.

Durham Earnings Gain

A. H. Carr was re-elected president of the Durham (N. C.) Hosiery Mills at the annual meeting of stockholders and directors April 19, and a special dividend of 50c. per share on the 6% preferred stock was declared.

Net earnings for 1931 were $74,504.03 and a special report submitted showed net earnings for the first quarter of 1932 of $38,714.06. This is the first dividend payment since 1930, and the second since the reorganization of the company.

All old officers were re-elected. The new directors are: B. B. Adams, D. F. Burns, A. H. Carr, W. F. Carr, D. St. Pierre Du Bose, George Watts Hill, John Sprunt Hill, and W. W. Sledge.

Brighton Mills Show Loss

The Brighton Mills, Passaic, N. J., and subsidiaries including Southern Brighton Mills, Shannon, Ga., report for the year ended Dec. 31 last net loss of $266,502 after all charges, which compares with a net loss of $83,210 in 1930. The latest balance sheet of the company shows a deficit of $534,206, current assets of $318,606 and current liabilities of $217,474.

Royal Weaving Loss Smaller

Royal Weaving Co., Pawtucket, R. I., reports for the year ended Dec. 31, 1931, net loss of $341,678 and a decrease in surplus of $570,959. In 1930 there was a net loss of $750,350 and in 1929 a net profit of $674,613. Total sales in 1931 were $3,450,320, or $1,756,674 less than in 1930.

Phoenix Hosiery Loss

A net loss of $1,371,514 after all charges, compared with a net loss in 1930 of $389,526; net profits of $321,935 in 1929 and a net profit of $368,541 in 1928 features the report of the Phoenix Hosiery Co., Milwaukee, including subsidiaries, for the year ended Dec. 31, 1931.

Net sales for 1931 amounted to $8,631,360. In the previous year the company did not make known its volume business.

Financial Notes

Net profit of the Onondaga Silk Co., Inc., Ogdensburg and Syracuse, N. Y., for 1931 amounted to $25,479, after taxes, which compares with net profit of $177,581 in 1930.

Belding Corticelli, Ltd., Montreal, Quebec, reports for the year ended Nov. 30, 1931, net profit of $73,913 after charges, compared with net profit of $121,163 in the previous year.

American Printing Co., Fall River, Mass., has been granted a tax refund of $28,832 by the city board of tax assessors. The 1931 valuation of the property has been cut from $3,850,000 to $3,150,000.

Phoenix Hosiery Co. has omitted the quarterly dividends of $1.75 each due at this time on the first and second preferred stocks.

A net loss in 1931 of $180,427, after all charges and taxes, as compared with a net income of $35,257, equal to 88c. a preferred share for the preceding year, is reported by Rollins Hosiery Mills, Chicago. Preferred dividend payments of $108,000 added to the 1931 net loss.

Susquehanna Silk Mills, New York, has filed a certificate with the Secretary of State at Albany reducing its capital from $6,254,200 to $3,754,200. Frederick H. Knight, 149 Madison Ave., New York, is attorney for corporation.

Boston Stock Auctions

The following sale of textile shares was made at auction, April 13:

Shares	Mill	Par	Price	Change
95	Naumkeag	100	46	—2

▶Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended Apr. 19:

	High	Low	Last Sale	Net Ch'ge
Adams Millis	23¼	22½	22½	—¾
American Woolen	3	2½	3	.....
American Woolen, pfd	26½	22½	23½	—1¼
Belding-Heminway	3½	3½	3½	.....
*Blumenthal	3½	3½	3½	—1½
Cannon Mills	17½	15½	17½	+1
Collins & Aikman	6½	4½	5½	.....
Consolidated Textile	¼	¼	¼	.....
*Courtaulds, Ltd	5½	5½	5½	.....
Gotham Hosiery	9¼	8½	9	+¼
Industrial Rayon	28	25½	26	—½
Kayser, Julius	6½	5½	6½	+¼
Kendall, pfd	26½	25	26¼	+¼
Mallinson	¾	¾	¾	+¼
Mohawk Carpet	8	6½	7½	.....
Munsingwear	14½	14½	14½	.....
Pacific Mills	7	6	6	+1
*Pepperell	29	29	29	.....
Real Silk Hosiery	3½	2½	3½	+1
*Tubize	2½	2	2½	—¼
United Piece Dye Works	7½	6½	7½	+½
Van Raalte	26	25½	25½	+2¾

*Listed on Curb.

▶New England Textile Stocks

	Sale	Bid	Asked
Am. Mfg. Co., pfd	50	44	..
Amoskeag	2½	..	..
Arlington	10	10	13
Associated Textile	10	..	10
Bates	10	12	..
Berkshire Associates, com.	1¼	1¼	3
Berkshire Associates, pfd.	40½	10	12
Bigelow-Sanford, com	9¼	..	..
Edwards	80½	..	25
Farr Alpaca	15	14	16
Hamilton Woolen	47½	50	..
Hill	7	2	5
Ludlow	48½	32	35
Merrimack, com	3½	3	..
Nashua, com	3½	3	5
Nashua, pfd	29	15	18
Naumkeag	46	44	46
Newmarket	10	9	12
Otis	45	41	45
Pacific	6	..	..
Pepperell	34½	28	32
Plymouth Cordage	49	40	45
West Point	35	24	27
York	8½	4	..

▸ Throwsters Institute Distributes "Better Times Pledge"

THE Throwsters Research Institute is distributing a "Better Times Pledge" to its members. This pledge, which was written for the institute by Henry J. Tynan, reads as follows:

A BETTER TIMES PLEDGE
BY AMERICAN PRODUCERS

Convinced

That prices in competitive lines are below rational limits;

That such prices can mean only lower wages, further unemployment, reduced buying power, and serious danger to the entire business structure;

That both buying and selling at cost, or below cost, now rank as wholly unfair practices, undermining business honesty and opposed to the welfare alike of the wage earner, his employer, and the public;

That Americans may not hope for good times while they continue their refusal to pay fair prices;

And that better prices may be restored most quickly through concerted action by us both as buyers and as sellers;

We now pledge

That we will buy no goods or services hereafter that are offered to us at cost or "below cost";

That we will ignore low bidders who cannot prove adequately that their prices are properly based upon fair wages and honest cost reckoning;

That we will move our prices forward at once and will continue to do so until they represent full cost sheet figures plus a profit;

That we will ask all dealers in our products to pledge themselves in like manner.

And we believe

That general adoption of this pledge will tend strongly to preserve decent wages and buying power, to avert bankruptcies, and restore normal good times.

▸ Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Apr. 16, based upon data compiled by Dept. of Agriculture, follow:

	Week Ended Apr. 16	Total to Date 1932	Total to Date 1931
Domestic.....	2,660,000	17,248,000	26,440,000
Foreign.....	356,000	10,848,000	17,260,000
Total.....	3,016,000	28,096,000	43,700,000
IMPORTS AT PRINCIPAL PORTS			
Boston.....	356,000	10,848,000	17,260,000
Philadelphia...	67,000	7,556,000	10,857,000
New York....	355,000	9,446,000	16,585,000
Total.....	778,000	27,850,000	44,702,000

▸ Chalky Finish Synthetic Yarn Fabrics Accented

"If synthetic fibers should still need rescuing from their shiny, low-priced past, they will find a deliverer in the lovely new acetate yarns which appear so prominently in the spring collections both here and abroad," is the opinion of Miss Dorothy Smith, stylist for The Duplan Silk Corp., who recently returned from the Paris openings. Miss Smith said Paris showings accented especially the chalky finish. Synthetic yarns, she added, "can produce the chalky finish and the extremely soft, dull surfaces which fashion demands, better than other fibers."

▸ Trade Practice Conference Defines "Silk"

Resolutions intended to promote equality of opportunity and fair competition in sale of goods in which silk is a component material, were adopted at a Trade Practice Conference held in New York, April 21. Three resolutions, which govern designation of weighted, pure dye, and mixed goods, provide that any goods containing an excess of 10% of any substance other than silk shall not be designated as "silk" unless there be added the word "weighted" or a similar qualification.

▸ N. Y. Chemists Hold April Meeting

The April meeting of the New York Section of the American Association of Textile Chemists and Colorists was held on Friday evening, April 22, at the Alexander Hamilton Hotel, Paterson, N. J. Speakers of the evening were Frank Schlayer of the Atlas Electric Devices Co., Inc., whose subject was "Foretelling Color Fastness with an Artificial Sun," and Hugh Mosher, chief chemist, of the U. S. Testing Co., whose subject was "Influence of Sericin on Dyeing."

▸ Cotton Cloth Replaces Burlap on Baling Wire Ties

Southern grown cotton made into cloth by manufacturers in the South will replace burlap for end wraps used on all baling wire bundles manufactured and sold by the American Steel & Wire Co. Not only will hundreds of bales of cotton be used in this manner annually, but all tags used on the wire will be made of cotton cloth. Cotton is being used, company officials say, in an effort to aid in the recovery of Southern agriculture and industries.

▸ Dedication of A.P.I. Textile School on May 6

Many prominent textile manufacturers are expected to attend the formal dedication of the new plant of the School of Textile Engineering at Alabama Polytechnic Institute, Auburn, Ala., on May 6. Invitations were printed on cotton cloth and mailed in cotton envelopes. E. W. Camp is the director.

▸ Clemson Installs Long-Draft Spinning Equipment

Clemson College (S. C.) Textile School, in order to train its students in the various systems of long draft spinning, is now installing the latest type of long draft made by the H. & B. American Machine Co., Pawtucket, R. I. About two years ago the school installed Casablanca long draft system made by Whitin Machine Works.

Business News

C. K. Davis Succeeds Dr. H. R. Carveth as President of R. & H.

At the directors' meeting of the Roessler & Hasslacher Chemical Co., Inc., manufacturers of R & H chemicals, held recently in New York, Dr. H. R. Carveth, president of the company, announced his retirement as president and director and as a director of E. I. du Pont de Nemours & Co., Inc., of which R & H is a subsidiary. Dr. M. J. Brown, vice-president and a director of R & H also resigned all positions with the company.

Charles K. Davis of New York was elected president to succeed Dr. Carveth. He will also be general manager of the company. Dr. E. A. Rykenboer, formerly vice-president of the company will be vice-president and assistant general manager. Mr. Davis has been president of the Viscoloid Co., another du Pont subsidiary.

Other R & H officers follow: Chairman of the board, W. F. Harrington; vice-president and secretary, Colby Dill; vice-president, Milton Kutz; treasurer, Albert Frankel; assistant treasurer, August Heuser; assistant secretaries, M. D. Fisher, E. A. Roward and J. Carlisle Swain.

Dr. Carveth's retirement ends almost 26 years of service. He joined R & H in 1906 as works manager of the Niagara Electrochemical Co., Niagara Falls, N. Y., and rose through successive offices to the presidency in 1928. Dr. Brown had been with R & H for 21 years.

The Roessler & Hasslacher Chemical Co., Inc., operates chemical manufacturing plants at Niagara Falls, N. Y., Perth Amboy, N. J. and El Monte, Calif. Since 1930, the company has been a subsidiary of the E. I. du Pont de Nemours & Co., Inc.

H. M. McCord Opens Philadelphia Office

The H. M. McCord organization has opened a Philadelphia office at the Commercial Trust Building in charge of C. M. French, who has been associated with the textile industry for fifteen years. The activities at this office will be devoted to the sale of complete mill properties, liquidations, appraisals, and the sale of all types of full-fashioned hosiery, seamless hosiery and underwear knitting properties and equipment. H. M. McCord also operates offices in New York, Boston and Greenville, S. C.

Keldur Corp. Now Handles Vibration Absorbing Material

Keldur, the vibration absorbing product, described in the Oct. 3, 1931, issue of TEXTILE WORLD, which at that time was offered by the International Products Corp., Milwaukee, Wis., is now being manufactured and distributed exclusively by the Keldur Corp., 26 Avenue B, Newark, N. J.

A. Drucker & Co. in New Offices

Offices of A. Drucker & Co., manufacturers of the rapid test kit for the examination of water and processing solutions, described in the March 26, 1932, issue of TEXTILE WORLD, are now located at 1507 East 55th St., Chicago.

QUOTATIONS

at close of business, April 20, 1932
Prices cover average qualities unless otherwise stated

Cotton Goods

	Apr. 20	Apr. 13	April 22 1931
PRINT CLOTHS			
27 -in., 64x60, 7.60	2¼c.	2¼c.	3¼
38½-in., 64x60, 5.35	3½-3¾c.	3½-3¾c.	5⅛-5½c.
39 -in., 68x72, 4.75	4¼-4½c.	4¼c.	6 -6¼c.
39 -in., 72x76, 4.25	5⅛-5½c.	5¼c.	6¾-7 c.
39 -in., 80x80, 4.00	5⅛-5⅜c.	5⅜c.	7 -7⅛c.
BROWN SHEETINGS			
36-in., 56x60, 4.00	4¼c.	4¼c.	5¼c.
36-in., 48x48, 3.00	4¼c.	4¼c.	6¼c.
37-in., 48x48, 4.00	4-4¼c.	4-4¼c.	5¼c.
PAJAMA CHECKS			
6½-in., 72x80, 4.70	4¼c.	4¼-4¼c.	6¼c
6 -in., 64x60, 5.75	4¼c.	4-4¼c	5¼c
MISCELLANEOUS			
Drills, 37-in., 3 yd..	4¼c.	4¼-5 c.	6¼-6¼c.
Denims, 2.20	9¼c.	9¼c.	12 c.
Tickings, 8 oz.	11 c.	12 c.	15½c.
Standard prints	6¼c.	6¼c.	7¼c.
Eastern staple ginghams, 27-in.	6 c.	6 c.	8 c.

Cotton Waste

Peeler comber	5½ - 5¾
Peeler strips	5 - 5¼
Sak. comber	4¾ - 5
Choice willowed fly	2¾ - 3¼
Choice willowed picker	2 - 3
Sak strips	6½ - 7
Linters (mill run	1¾ - 2¼
White spooler-(single)	4 - 4¼

Cotton Yarn

CARDED (Average Quality)
Double Carded 2c.—4c., higher according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.12	22s	$0.15½
10s	- .12½	24s	- .16
12s	- .13	26s	- .17
16s	- .14	30s	- .18
20s	- .14½	40s ex qual	- .26

TWO-PLY SKEINS AND TUBES

8s-2	$0.12½	26s-2	$0.17- .17½
10s-2	- .13	30s-2	18- .18½
12s-2	13- .13½	36s-2	- .24
14s-2	- .13½	40s-2	- .25
16s-2	- .14	49s-hi.brk	- .26
20s-2	14½- .15	50s-2	- .31
24s-2	16½- .17	6ps-2	- .34

SINGLE WARPS

10s	$0.12½	24s	$0.16
12s	- .12½	26s	- .17
14s	- .13½	30s	- .18½
16s	- .13½	40s ex. qual	- .26
20s	- .14½		

TWO-PLY WARPS

8s-2	$0.12½	24s-2	$0.16½- .17
10s-2	- .13	26s-2	17½- .18
12s-2	- .13½	30s-2	18 - .18½
14s-2	- .14	49s-2 ordin.	- .25
16s-2	14 - .14½	50s-2	- .31
20s-2	14½- .15	60s-2	- .34

8s-3 and 4-ply skeins and tubes; tinged, 11; white, 12; waste, 10½

HOSIERY CONES (Frame Spun)

8s	$0.12	22s	$0.15½- .16
10s	- .12½	24s	- .16½
12s	- .13	26s	- .17½
14s	- .13½	30s tying	17½- .18
16s	- .14	30s reg	19 - .19½
18s	- .14½	30s ex. qual.	20 - .20½
20s	- .15	40s	- .25

COMBED PEELER (Average Quality)

TWO-PLY—(Knitting Twist) Cones

20s-2	$0.25	60s-2	$0.39 - .40
30s-2	.27 - .28	70s-2	.50 - .52
36s-2	.29 - .30	80s-2	.60 - .63
40s-2	.30 - .31	90s-2	.85 - .87
50s-2	.33 - .35	100s-2	.98 -1.05

WARPS, SKEINS AND CONES

TWO-PLY—(Warp Twist)

20s-2	$0.25	60s-2	$0.40 -0.41
30s-2	.28 - .29	70s-2	.50 - .52
36s-2	.30 - .31	80s-2	.60 - .62
40s-2	.31 - .32	90s-2	.85 - .90
50s-2	.35 - .36	100s-2	.95 -1.02

SINGLES

12s	$0.18½-0.19½	30s	$0.26 -0.27
14s	19 - .20	38s	.28 - .29
16s	.19½- .20½	40s	.30 - .31
18s	.20 - .21	50s	.33 - .34
20s	.21 - .22	60s	.39 - .40
24s	.23 - .24	70s	.50 - .51
28s	.25 - .26	80s	.60 - .61

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.42 -0.44	90s-2	$0.95
30s-2	.43 - .45	100s-2	1.20-1.25
36s-2	.45	120s-2	1.55-1.60
40s-2	.47	30s	.49- .51
45s-2	.48	40s	.54- .56
50s-2	.50 - .52	50s	.60- .62
60s-2	.55 - .57	60s	.65- .68
70s-2	.69	70s	.77- .80
80s-2	.79	80s	.92- .96

Cotton Prices and Statistics

COTTON STATISTICAL DATA
(Fluctuations of Futures)

	Closed April 14	For Week—High	For Week—Low	Closed April 20	Net Ch'ge
April	6.23	6.97	5.99	6.08	—0.15
May	6.30	6.33	6.06	6.13	—0.17
June	6.38	6.38	6.09	6.20	—0.18
July	6.48	6.52	6.18	6.30	—0.18
August	6.57	6.57	6.27	6.39	- 0.18
September	6.65	6.65	6.35	6.48	—0.17
October	6.73	6.76	6.43	6.56	—0.17
November	6.80	6.80	6.51	6.63	—0.17
December	6.88	6.93	6.59	6.71	—0.17
January	6.97	7.00	6.67	6.79	—0.18
February	7.04	7.04	6.76	6.86	—0.18
March	7.13	7.16	6.84	6.95	—0.18

SPOT FLUCTUATIONS FOR WEEK
(Middling)

	New York	New Orleans	Liverpool
Thursday, April 14	6.40	6.37	4.91
Friday, April 15	6.30	6.26	5.00
Saturday, April 16	6.20	6.18	4.96
Monday, April 18	6.15	6.12	4.86
Tuesday, April 19	6.10	6.08	4.89
Wednesday, April 20	6.25	6.18	4.94

FOREIGN COTTONS

Egyptian Cotton

Alexandria Exchange, Apr. 18.		Change
May. Sak	11.50	—0.02
Apr. Uppers	9.62	—0.13
Apr.-May Shipment c. i. f. Boston (Tariff not included)		
Fully good fair Sak (No. 38)		12.20
Fully good fair to good Uppers (No. 10)		10.40

(By Anderson, Clayton & Co.)

Foreign cottons	F. O. B. New York, Cents
Peruvian Tanguis Strict Middling	16
Peruvian Pima No. 1	15½
Peruvian Moderate Rough	10
Peruvian Full Rough	16
China Tientsin No. 1	9
India Rough	7 to10
India Smooth	6½ to 7½

(By Bruns-Nordeman Co.)

MOVEMENT INTO SIGHT

	This Year	Last Year
Week	93,000	78,000
Season	†13,771,000	12,341,000

†61,000 deducted.

WORLD VISIBLE SUPPLY

	April 15	One Year Ago
Interior towns and ports of U.S.*	5,941,000	4,748,000
Afloat to and at ports of Europe	1,449,000	1,848,000
Afloat to and at ports of Orient	1,148,000	25,000
Total	8,538,000	7,121,000
Change during week	Decrease 165,000	Decrease 124,000

*Includes afloat to New York.

FORWARDINGS TO MILLS OF WORLD

	This Year—Week	This Year—Season	Last Year—Week	Last Year—Season
No. States, U.S.	12,000	646,000	19,000	699,000
So. States, U.S.	56,000	3,578,000	69,000	3,134,000
Total U.S.	68,000	$4,224,000	88,000	3,833,000
Great Britain	34,000	975,000	20,000	664,000
Continent	100,000	2,649,000	58,000	2,614,000
Orient	53,000	2,411,000	32,000	966,000
Canada and other America	3,000	141,000	4,000	174,000
Total foreign countries	190,000	6,176,000	114,000	4,418,000
World total	258,000	10,400,000	202,000	8,251,000

EXPORTS FROM UNITED STATES

Total	125,000	7,142,000	92,000	5,817,000

AVERAGE PRICE APR.-MAY. SHIPMENT HARD WESTERN COTTON
F.o.b. New England

	Middling	St. Middling
1 1/16-in	7⅞- 8c.	8⅛- 8½c.
1⅛-in	8⅛- 8½c.	8⅝- 9c.
1 3/16-in	9⅛- 9⅝c.	10 -10½c.
1¼-in	11⅛-12½c.	12½-13½c.

Based on New York, May, 6.05

SPOT FLUCTUATIONS AND STOCKS

Markets	April 13	April 20	Sales	This Week	Last Year
Galveston	6.25	6.20	2,979	695,087	549,734
New Orleans	6.26	6.18	6,396	1,068,507	734,434
Mobile	5.95	5.90	196	179,807	244,679
Savannah	6.18	6.13	2,010	250,827	363,394
Norfolk	6.20	6.15	439	58,222	81,677
New York	6.25	6.25	4,370	205,904	227,594
Augusta	6.19	6.19	1,121	116,271	84,719
Memphis	5.60	5.50	14,681	388,048	229,401
St. Louis	5.75	5.65			8,442
Houston	6.20	6.15	4,305	1,356,084	1,071,318
Dallas	5.80	5.75	4,677	23,987	9,505

DIFFERENCES ON AND OFF MIDDLING WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M.F	0.50†	.75†	0.65†	0.63†	0.64†
S.G.M	.40†	.50†	.55†	.56†	.51†
G.M	.30†	.40†	.40†	.38†	.37†
S.M	.20†	.20†	.25†	.19†	.22†
S.L.M	.20*	.20*	.25*	.19*	.22*
L.M	.40*	.50*	.50*	.50*	.48*
S.G.O.**	.75*	.75*	.85*	.88*	.81*
G.O	1.00*	1.00*	1.15*	1.25*	1.11*
YELLOW TINGED					
G.M	0.25*	0.25*	0.25*	0.25*	0.26*
S.M	.35*	.40*	.35*	.50*	.39*
M.**	.50*	.50*	.50*	.63*	.52*
S.L.M	.90*	.90*	.85*	.88*	.88*
L.M	1.25*	1.25*	1.15*	1.25*	1.24*
YELLOW STAINED					
G.M	0.50*	0.55*	0.50*	0.50*	0.50*
S.M.**	.90*	.90*	.85*	.88*	.87*
M.**	1.25*	1.15*	1.15*	1.25*	1.22*
BLUE STAINED					
G.M.**	0.65*	0.60*	0.50*	0.63*	0.58*
S.M.**	1.00*	.80*	.85*	1.00*	.91*
M.**	1.25*	.90*	1.15*	1.25*	1.18*

**Grades not deliverable on contract.
*Off Middling. †On Middling

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA (IN GREASE)

Fine delne	$0.20 –$0.21	¾ blood	$0.20 –0.21
Fine clthg	.16 – .17	⅝ blood	.18 – .19
½ blood	.20 – .21		

TEXAS AND CALIFORNIA (CLEAN BASIS)

Texas, 12 months	$0.48 –0.50
California, Northern	.42 – .43

PULLED—EASTERN (CLEAN BASIS)

AA	$0.50 –$0.52	B-Super	$0.42 –0.45
A-Super	.46 – .48	C-Super	.35 – .38

MONTANA, IDAHO AND WYOMING (CLEAN BASIS)

Staple fine	$0.50 –0.52
Staple ½ bld	.48 – .50
Fine and fine medium	.46 – .48
⅝ blood	.42 – .44
¾ blood	.36 – .38

MOHAIR—DOMESTIC

Best carding	$0.20 –0.22
Best combing	.25 – .27

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.17 –0.21
Cape firsts	.18 – .21

FOREIGN CLOTHING AND COMBING (CLEAN BASIS IN BOND)

Australia:	
70s	$0.38 –0.40
64s	.30 – .32
58s-60s	.28 – .30

(IN GREASE)

Montevideo:	
58s-60s	$0.17 –0.18
56s	.16 – .17
50s	.15 – .16
Buenos Aires:	
4s, 40-44s	$0.10 –0.11
5s, 36-40s	.09 – .10

FOREIGN CARPET (GREASE BASIS IN BOND)

Aleppo washed	$0.19 –0.20
China: Combing No. 1	.12 – .13
China Filling Fleece	.11 – .12
Szechuen ass't	.12 – .13
Cordova	.09 – .10
Scotch black face (nominal)	.14 – .16
East India: Kandahar	.15 – .16
Vican'r	.19 – .20
Joria	.19 – .20

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s 36s	$0.70– .72½
2-24s 40s	– .80
2-26s 44s	80 – .82½
2-28s 46s	.85 – .87½
2-30s 48s	.90 – .92½
2-32s 50s	.92½– .95
2-30s 64s fancy mixes	1.20 –1.22½
(Single yarns 5c. less than above)	
2-36s 58s	1.00 –1.02½
2-40s, 60s	1.12½–1.17½
2-40s, 64s	1.15 –1.20
2-50s, 66s	1.30 –1.35
2-60s, 70s	1.65 –1.70

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.65
2-20s, 48s in oil	.67½– .70
2-20s, 50s in oil	.70 – .72½
2-20s, 56s in oil	.82½– .85
2-20s, 60s in oil	.95 – .97½
2-20s, 64s in oil	1.10 –1.12½
1-18s, 48s dyed	.85 – .87½
1-18s, 50s dyed	.90 – .92½
(Oil yarns 17½c. less)	

FRENCH SYSTEM

1-20s, 58s	.90 – .95
1-20s, 60s	1.02½–1.05
1-18s, 64s, dyed	1.25 –1.27½
1-26s, 64s	1.02½–1.05
1-30s, 64s, Warp	1.10 –1.12½
2-30s, 64s, Fancy mixes	1.27½–1.32½
2-40s, 64s, Zephyrs	1.25 –1.27½
1-50s, 66s	1.35 –1.37½
2-50s, 66s	1.45 –1.47½
2-60s, 70s domestic	1.80 –1.85
1-60s, 70s, Australian	1.60 –1.70
2-60s, 70s, Australian	1.77½–1.87½

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	.90 – .92½
1-40s, 50-50-60s on cops	1.00 –1.02½
1-40s, 50-50-64s on cops	1.02½–1.05
1-40s, 50-50-64s Australian cops	1.10 –1.15

Underwear mixes, 3 to 5c., Solid color, 35c. additional.

New York Top Futures

	Closed Apr. 13	For Week High	For Week Low	Closed Closed	Net Ch'ge
April	60.00	60.00	60.00	60.00	.....
May	60.00	61.00	60.00	60.00	.....
June	60.00	61.00	60.00	60.00	+1.00
July	60.00	61.00	60.00	61.00	+1.00
August	60.00	61.50	60.00	61.00	+1.00
September	60.00	61.50	60.00	61.20	+1.20
October	60.00	61.50	60.00	60.00	.....
November	60.00	61.80	60.00	60.00	.....
December	60.00	61.50	60.00	60.00	.....
January	60.00	62.40	60.00	60.00	.....
February	60.00	62.70	60.00	60.00	.....
March	60.00	63.00	60.00	60.00	.....

Tops and Noils

TOPS—BOSTON (Nominal)

Fine (64-66s)	$0.71 –0.72
Half-blood (60-62s)	.69 – .70
High ¾ blood (58s)	.58 – .60
Aver. ¾ blood (56s)	.56 – .57
Low ¾ blood	.52 – .54
High ½ blood (50s)	.49 – .51
46s S. A. and N. Z.	.51 – .53
44s S. A. and N. Z.	.48 – .50
40s S. A. and N. Z.	.45 – .47

TOPS — BRADFORD, ENG. (April 15)

Fine (70s)	24 d	⅝ bld. (56s)	16½d
Fine (64s)	22½d	½ bld. (50s)	12 d
½ bld. (60s)	21½d	Cross-bred (46s)	9 d

NOILS — BOSTON

Fine	$0.38 –$0.40	High ½ bld.	$0.26 –$0.28
Half-bld	.32 – .35	Low noils	.20 – .23
Aver. ¾ bld.	.28 – .30	Medium	
Fine colored	.23 – .28	colored	.18 – .20

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.57 – .59
Lap, fine colored	.40 – .43
Hard ends, fine white	.42 – .44
Hard ends, ½ blood white	.28 – .31
Hard ends, fine colred	.18 – .20
Hard ends, medium colored	.13 – .15
Card, fine white	.23 – .25
Burr, fine carbonized	.24 – .26

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, coarse light	$0.04½–0.05
Merinos, fine dark	.02½– .03
Merinos, fine light	.09 – .10
Serges, blue	.04½– .05
Serges, black	.04½– .05½
Serges, red	.07½– .08
Knit, white	.21 – .22
Knit, red	.08 – .08½
Knit, light hoods	.08½– .09½
Worsted, light	.03½– .04
Worsted, blue	.05 – .05½
Worsted, black	.05½– .06

Silk Yarns

THROWN SILK (60 day basis) Prices Nominal

Japan organzine, 2 thd. spec. gd. XX sk. 85%	$2.65
Japan organzine, 2 thd. grand sk. 83%	2.55
Japan organzine, 2 thd. sp. crack. sk. 81%	2.45
Japan crepe, 3 thd. gd. XX bob. 83%	2.30
Japan crepe, 3 thd. sp. crack. bob. 81%	2.20
Canton crepe, 3 and 4 thd. 14/16 on bobbins	2.00
Hosiery tram, 3 thd. Japan 90%	3 30
Hosiery tram 5 thd, Japan, 85%	2.40
Hosiery tram, crack XX 78%	2.05

SPUN SILK YARNS (Terms: net 30)

40/2	$3.10	60/2	$3.35
54/2	3.30	62/1	2.35

Raw Silk

(60 Day Terms. Spot Goods) Prices Nominal

	13/15 White	20/22 White	20/22 Yellow
Super Grand, 87%	$1.80	$1.55	$1.60
Special Grand, 85%	1.70	1.45	1.50
Grand XX, 83%	1.60	1.40	1.45
Special Crack, 81%	1.50	1.35	1.40
Crack XX, 78%	1.45	1.30	1.35
Extra Extra, 73%	1.40	....	....
Best Extra, 68%	1.30	....	....

Canton filature, new style, 14/16	$1.20
Canton filature, new style, 20/22	1.10
Tussah filature, 8 cocoon	.70

NATIONAL RAW SILK EXCHANGE

	Close Apr. 13	For the Week High	For the Week Low	Close Apr. 19	Net Ch'ge
April	1.34	1.38	1.34	1.38	+0.04
May	1.34	1.39	1.32	1.37	+0.03
June	1.34	1.36	1.34	1.36	+0.02
July	1.34	1.36	1.32	1.36	+0.02
August	1.35	1.39	1.33	1.39	+0.04
September	1.35	1.39	1.33	1.38	+0.03
October	1.35	1.38	1.31	1.38	+0.03
November	1.35	1.39	1.32	1.39	+0.04

Total number of bales, 2.230. Total approximate value, $474,544. Trading unit crack XX 13/15 white 78%.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First Qual.	Second Qual.
30	8	$2.25	...
50	12-18	1.35	$1.25
75	18-30	1.20	1.10
100	18-40	1.00	.90
125	36-50	.90	.80
150	30	.72	.70
150	24-44	.75	.72
150	60	.85	.82
150	75-90	.85	.82
170	24-27	.75	.72
170	60	.85	.82
200	30-42	.75	.72
300	42-62	.63	.60
450	42-72	63	60
600	72-96	63	60
900	100-144	63	60

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
75	$1.35	$1.25	150	$0.75	$0 72
100	1.05	.95	175	.75	.72
125	.95	85			

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	24	$3.10	75	60	$1.30
25	24	2.85	80	60	1.30
30	24	2.60	100	75	1.10
40	30	1.70	120	90	1.00
52	30	1.50	150	112	.90
65	45	1.40	180	135	.87

ACETATE PROCESS

Denier	Price	Denier	Price
45	$1.60	125	$1.10
60	1 50	150	1.00
75	1.40	300	1.00
100	1.30		

Rayon Waste

Open bleached waste	$0.13–$0.14
Open bleached waste	.10½
Bleached thread waste (mfs.)	.09
Bleached thread waste (misc.)	.06– .07
Colored thread waste	.03– .04
Colored clips	.03– .04

CONVERTED RAYON WASTE

Bleached tops	$0.30–$0.32½
Unbleached tops	.27– .28
Bleached noils	.11
Unbleached noils	.09½
Bleached garnetts	.12
Unbleached garnetts	.13
Colored garnetts	.10– .11

Silk Waste

Kibizzo Kakai Grand XX	0.50
Kibizzo Kakai Triple Extra	.44
Frison Grand Double	.49
Pierced Cocoons	.50

To mill men who are seeking new ways to cut production costs in wet finishing

If you're wracking your brain looking for ways to cut production costs without sacrificing quality, take time to read these facts about Olate Flakes, the pure, neutral textile soap that is giving mill men some new ideas about wet finishing.

Olate Flakes saves real money in time and labor — from start to finish. Because of its exceptionally low titer and flake form a fulling solution of Olate can be made up in 10 to 15 minutes, instead of the usual 3 or 4 hours that solid soaps require.

And a solution containing as much as 16 ounces of Olate per gallon stays liquid at ordinary temperatures. Yet it has all the body necessary for successful finishing.

Think what that means. There's no "gel" to break up. Your Olate fulling solution can be measured easily and accurately by pailfuls, or piped direct to the mills and washers.

Olate gets down to business faster, too. Penetration of the goods is unusually rapid and uniform. The rich Olate solution reaches every fiber. There's no waiting for lumps of solid soap to be squeezed into the fabric. No sloppy coating collects on the sides and other parts of your machines.

Olate is a free rinser. Fabrics are quickly freed from all traces of soap. Troubles such as stickiness, cloudiness in dyeing and unpleasant odors from the development of rancidity are reduced or entirely eliminated when Olate is used for finishing.

And now about quality results. With all of its ability to save time and labor, Olate sacrifices nothing in the way of processing efficiency and safety. In fact, it is Olate's superior finishing results which have been chiefly responsible for its adoption by a large number of America's most successful woolen and worsted mills.

Investigate this modern way to assure lower production costs and better processing results. A trial run with Olate in your plant will convince you.

Procter & Gamble, Cincinnati, Ohio

GOOD SOAP IS GOOD BUSINESS